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ORIGINAL LECTURES.

KNOCK-KNEE AND BOW-LEGS, WITH REMARKS UPON RACHITIS.

Two Clinical Lectures Delivered at the Philadelphia Hospital.

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LECTURE I.

GENTLEMEN: As Macewen, of Glasgow, and others, have, by the revival of the operation of osteotomy for the cure of knock-knee and bow-legs, renewed the interest in these deformities, and place themselves on record as being ardent advocates of operative procedures for their radical relief, it will be my endeavor to call your attention especially to these important malformations; and I purpose to inquire how far operations are a necessity for their correction, and what proportion and class of cases can be best treated by such means, and, also, whether mechanical methods of treatment are not fully as important as those of a more radical nature.

Mechanically considered, knock-knee and bow-legs result from an alteration in the plane of the articulating surfaces of the bones entering into the formation of the knee-joint, with or without a curving of the shaft of the femur or tibia, whereby the knee is thrown either inside or outside a perpendicular line let fall from the head of the femur to a point midway between the two malleoli. Should the knee fall inside this line, the resulting deformity is known as knock-knee or *genu valgum*, the opposite condition, that in which the knee is without the perpendicular, being called bow-legs or *genu varum*, and the causes producing these results may be summarized as: 1. Rachitis. 2. Ligamentous relaxation. 3. Central disturbances destroying the equilibrium of muscular action, or affecting the nutrition of the epiphyses.

By far the most frequent and important cause is the one first mentioned: namely, *rachitis*, which favors the production of deformity by the softening of bone and the relaxation of ligaments which occurs during its progress, whereby we have an alteration of the normal development of the cartilage and periosteum from increased cell proliferation, the resulting cartilaginous and osseous tissues being less completely matured, and much more retarded in their development than in the normal course of bone growth. Moreover, the rapidly proliferated cells are not supplied with a sufficient quantity of inorganic elements, and, therefore, a relative excess of organic material with a corresponding deficiency of lime salts occurs. In other words, the cells which are deposited are immature, half ripe in character, and the dyscrasia interferes with their normal progression toward maturity. When the disease finds expression in the epiphyses, it occurs at the epiphyseal juncture, at which point we find the cartilage filled with young cells which are neither mature cartilage cells nor true bone cells, but have a character which partakes of both. In consequence of this abnormal cell deposit we find the thickness of the cartilage is increased, and the structure has not the resisting quality so marked in health; on the contrary, the aggregation of cells forms a soft, non-resisting material which breaks down and gives away under pressure, and if this pressure be unequally distributed, bending of the bones and alteration of the plane of the joints result.

Rachitis is, primarily, a constitutional disorder, whose local manifestations fall with greatest force and frequency upon the organs of locomotion and support, the bones, epiphyses, articular surfaces of the joints, the ligaments, and muscles. The osseous changes found are due to increased vascularity of the periosteum and other nutritive centres, the epiphyses, and medullary substance. Rachitis is a disease of early childhood. Cases in which it is congenital have been reported, and knock-knee and bow-legs have been observed in the newborn. The disease most usually begins about the period of dentition, and is attended by disturbances in the alimentary tract, vomiting and chronic diarrhœa being frequent. The patients suffer also from sweating of the head, face, and neck, and prefer to lie quietly, resisting attempts to move or handle them. With this, notable weakness and marked tenderness are observed, and this weakness, noticeable chiefly in the muscles, sometimes give rise to a condition which has been mistaken for infantile paralysis, although no palsy exists. Whilst some children suffering from rachitis appear fairly well nourished, the majority have a large belly, and a puffy, flabby condition of flesh, easily distinguished from the firm, resistant feeling of healthy tissues. They are also peculiarly liable to convulsive affections, as before mentioned, and chronic hydrocephalus occurs frequently. Thirst is at times urgent; the patients sit or lie about; are silent or drowsy, and at night often rest upon their hands and knees, with their heads buried in the pillow, or toss restlessly from side to side.

Whilst these symptoms are progressing, notable changes are going on in the bones, muscles, and ligaments. I have already alluded to these changes in my general remarks on pathology, and have shown you how their chief expressions are found in the epiphyses and shafts of the bones. Clinically, it is not, however, alone in the long bones that the changes take place. The skull, with its thin and softened envelope and thickened sutures; the thorax, as shown principally in the beaded ribs, chicken-breast, and curved vertebræ, and the flattened, distorted pelvis, all bear evidences of the disease. Not all the cases, however, exhibit these universal effects of the general condition. Indeed, I have seen undoubted evidences of localized rachitis, where the disease, so to speak, had expended itself upon one locality. Thus, it is not unusual to see deformities which are unilateral in character, and one-sided cases of bow-legs and knock-knee are not uncommon. We have already

spoken of the causes which produce this condition, and will only add that, although it is found more frequently amongst the poorer classes, the wealthy are by no means exempt from it. Poor sanitary surroundings, insufficient nourishment, lack of air and sunlight, and the crowding together of many people, frequent pregnancies, and the bringing up of children "by hand," all add their quota as active agents in its production. Locality and climate also have their influence as causative factors. Thus, it is by no means a common disease amongst American children, but is very frequent in Southern races, the negro being peculiarly liable to it; and its frequency in England has caused the Germans to give to it the appellation of "*Englische Krankheit.*"

I have dwelt at length upon the general manifestations of rachitis, as it is in this stage, before local symptoms have developed, that general treatment may prevent deformity. In beginning the treatment, great care should be exercised in the selection of appropriate diet, and all errors in this and the surroundings of the patient should be corrected. The child should be regularly taken out in the open air, and "sun-baths" given. Attention should be especially directed to the proper bathing of the child, and the skin kept in good condition by these means. The diet should be digestible and nutritious, and all approved methods having for their object the proper hygienic care of the patient should be persistently and systematically employed. As to drugs, those which are directed to checking the diarrhœa after the bowels have been emptied of irritating matter are first indicated. The time-honored "rhubarb-and-soda" mixture will best accomplish the latter purpose, while drop doses of tincture of opium, with the addition of an alkali, have best succeeded in my hands in checking the diarrhœa. To improve the general condition of the child, cod-liver oil may be given, and by many it is considered a specific; but there are many objections to its use: it is apt to increase the digestive trouble, and many children cannot be induced to take it, no matter how disguised. Good, fresh butter answers admirably as a substitute, and fulfils all the indications of the oil. The compound syrup of the hypophosphites is another excellent remedy, and is readily administered for a long time. Iron is an efficient tonic, especially the syrup of the hypophosphite or the iodide. Phosphorus also has given excellent results in this as well as other wasting diseases of the bones. Such is a brief outline of the medicinal treatment of rachitis, important in all cases of the disease, but important in cases prior to the occurrence of deformity, in addition to which mechanical supports should frequently be used as a prophylactic measure. The case I now show you will illustrate this principle:

CASE I. *Softening of the bones from rachitis; retention braces; improvement.*—J. M., æt. twenty-six months. The hereditary history in this case good, as to bone, joint, or lung troubles; she was apparently healthy until her eighth month, when her mother was obliged to leave her to the care of strangers. At this time it was noticed that she was not as lively as usual, had frequent diarrhœa, was peevish and restless at night, sweating freely, frequently soaking the pillow. She has never attempted to walk, but can hold herself erect by the aid of chairs. You will notice the flabby condition of the muscles, although she is apparently fairly nourished, and although presenting all the characteristic symptoms of rachitis, the large head, protuberant belly, and flattened epiphyses indicate rachitis, there is, as yet, no evidence of deformity of the lower extremities, for the child has not yet walked, and nature has evidently acted in a conservative manner, by depriving the muscles of their proper tone, thereby making it impossible for the child to throw the weight of the body upon the lower extremities, and we have happily the power to prevent, by mechanical means, the occurrence of deviations which would surely follow were the softened osseous tissues allowed to bear unaided the superincumbent weight of the body.

In this case the object has been accomplished by the application of retention braces, consisting of two steel uprights fastened to the shoe, and extending above the knee, with joints corresponding to the articulation of the knee and ankle. These allow free motion, but at the same time remove the superincumbent weight. To one point I wish especially to call your attention: when I grasp the thigh and leg of the patient, and move the knee-joint from side to side, you can easily distinguish the preternatural lateral mobility of the articulation, a common condition in rachitic subjects. This is due to ligamentous relaxation, and opinions vary as to the ligaments involved, and their action in the production of the deformities, it being considered by some that primary relaxation of the internal lateral ligament results in a separation between the articular surfaces of the knee-joint upon the inner side, allowing increased growth of the internal condyle downward and inward in the gap between its lower surfaces at the head of the tibia, while others are of the opinion that shortening of the external lateral ligament, by permitting pressure to be exerted upon the external condyle, prevents its normal growth, the internal condyle, at the same time, completing its development. While some cases occur in which ligamentous relaxation seems to be the only *apparent* cause of the deformity, they are extremely rare, and I think that the relaxation, as a rule, is secondary to, and symptomatic of, the bony changes. While much attention has been given to the external ligaments of the knee-joint as factors in the causation of knock-knee, I am sure that the *internal* ligaments of the joint, principally the *crucial*, are largely concerned in the deformity; but as to the mechanism of these ligaments as causative agents, I cannot, for want of time, enter. In the small class of cases which exhibit no evidence of rachitis, but which suffer from relaxation of ligaments, the term atonic can best be applied. They are similar to the class of lateral spinal curvatures known as habitual or functional; but, as before stated, in the majority of cases the ligamentous changes are secondary to the osseous ones, and depend upon the general condition—*i. e., rachitis.*

The changes which occur in the bones, and which lead to the deformity, may be divided into three stages:

1st. The stage of vascularity, or invasion.

2d. The stage of softening, or deformity.

3d. The stage of consolidation, or sclerosis.

It is important that these stages should be recognized, as giving important indications for treatment. The second stage is well illustrated in the case before us: when I grasp the limbs, and attempt to bend the bones, a characteristic springy sensation is imparted to the hands, showing that the stage of softening is still in progress, and indicating that constitutional and mechanical treatment are sufficient.

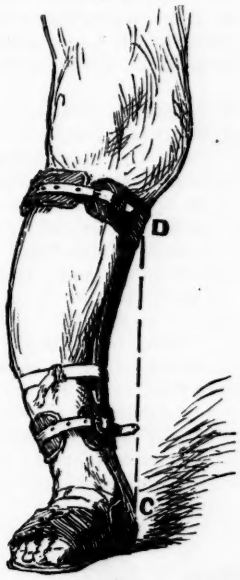
When softening has further progressed, and deformity has begun from the weight of the body upon the diseased tissues, mechanical support may still suffice; but when hardening or sclerosis has once occurred, and the bones are in a deformed position, nothing but operative measures will restore the limb to its normal position. To determine this stage in doubtful cases, I use an instrument which I look upon as an important aid to correct diagnosis, *i. e.*, the ordinary bone drill, preferably, the cog-wheel drill of Colin, of Paris; the procedure is analogous to exploratory incision prior to other surgical operations. Where the drill encounters no obstacle to its entrance into the bone, and imparts to the hand the sensation indicative of soft tissue, operative procedures are not necessary, but, should the characteristic resistance of the sclerotic stage, as if the drill were being bored through ivory, be met, mechanical measures will be futile, and operation is necessary.

I have an opportunity of showing you another case illustrative of the stage of softening with beginning deformity.

CASE II. *Bow-legs from rachitis; mechanical support; improvement.*—This patient, Mary W., is three years old; gives all the evidences of having had rachitis, and still shows symptoms of what may be called the subacute stage. You notice many of the conditions to which I called your attention in speaking of the child who has just passed out, but, in addition to these, you are at once struck with the peculiar waddling gait, and the tendency of the feet to a varus position when the child attempts to walk. This varus is not constant, as in some cases of bow-legs there may be a valgoid position of the feet. Here you again see the unusual lateral mobility of the knee-joints. In the present instance the deformity, which is quite marked, is produced by curvatures affecting both the femur and the tibia: that is to say, the rachitic process has involved the diaphyses above and below the knee-joint. This is not, by far, as common as those cases where the tibia is alone affected, in which case the deformity usually takes place at about the middle of the tibia, although the same condition, greatly magnifying the distortion, may occur at the lower third, or an anterior curvature of the tibia may be observed. When I grasp the bones firmly, I at once get a peculiar springy response, and this serves as a guide to my treatment in this stage. In answer to inquiry concerning the increase of the deformity, the mother states that the bowing has increased very rapidly during the last four or five months; that before this it was not at all marked, and she has experienced no fear of a permanent deformity, having been told by a practitioner that the child would surely grow out of it. This is a popular fallacy, and cannot be too strongly condemned. The indications for mechanical treatment are therefore very plain. In order to counteract the effect of the superincumbent weight, which falls on the lower extremities during the day in the act of walking, it becomes necessary to have something which shall relieve this, and, for this purpose, I use the conventional apparatus which I briefly described in speaking of the first case. This brace will allow your patient to go about at the minimum risk of increasing the deformity, and also give him an opportunity to get sunlight and fresh air, very important adjuncts toward improvement of his general condition. In cases in which deformity is present, this serves merely as a retention splint, and something more powerful must be used to overcome the deformity.

The brace which I have advised for the application of elastic traction, has, in my hands, in private and hospital practice, accomplished excellent results. It consists of a piece of straight tempered steel, its upper extremity terminating in a semi-circular steel band to extend half way around the limb; below, and jointed to it opposite the ankle is a steel foot piece with heel cup, which is secured to the foot by a strap passing over the instep, and a light leather shoe-piece laced over the foot. The length of the upright is regulated by the position of the curvature in the bones: in bow-legs where this occurs in the tibia, the upright should, therefore, extend only to its upper border. The brace is adjusted by securing it to the internal aspect of the limb, and the elastic element of the brace brought into play by strapping the steel upright to the leg at the point of the greatest convexity.

FIG. 1.



(Fig. 1.) It should be thus applied at night, and it is readily seen that its constant effort to return to the straight line D C exerts a continuous elastic force in a direction calculated to reduce the deformity.

ORIGINAL ARTICLES.

NEPHROLITHOTOMY.

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MR. S. W., aged thirty-eight, a resident of Sydney, Nova Scotia, was brought to me by Dr. McPherson, of that place. Mr. W. had enjoyed perfect health until May, 1876, when he was overtaken with a severe attack of acute rheumatic fever, lasting, in a modified form, for nearly six months, and leaving him with an ankylosed knee-joint. The year following, the fall of 1877, he had a

severe paroxysm of what was regarded as renal colic, and every succeeding month for five months, similar attacks were experienced, lasting seldom less than twenty-four or forty-eight hours. From this time until 1879, he enjoyed a complete immunity from pain, but after this long exemption was again seized with another paroxysm of unusual severity and duration, which confined him to his bed for an entire week. During all this time, no calculi were passed, and comparatively little vesical irritation was experienced.

From this period onward, until September, 1887, he continued in fair health, experiencing, however, at irregular intervals, more or less pain in the left lumbar region, seldom lasting over half an hour. It was now that the urine became quite turbid. In October, the pains in the left lumbar region became more severe, scarcely ever intermitting. These pains were not confined to the left lumbar region, but extended over the entire left side of the abdomen, reaching in not a few instances to the right loin, also shooting down the left thigh, and into the left testicle, accompanied by strong retraction of the gland.

About the latter part of October, the urine became thick, ropy, and offensive, and the old pains almost unendurable. This condition was again followed by a notable abatement of pain, and a marked improvement in the appearance of the urine.

At the time the patient arrived in Philadelphia, which was the last week in November, he was again beginning to suffer from the lumbar pains, attributed, and perhaps correctly, to the effects of the long journey from Sydney to this city. The urine, on examination, was found to contain a considerable quantity of pus, blood, and some renal epithelium. The diagnosis was stone in the left kidney, and the operation of nephrolithotomy recommended. To this the patient readily assented, and on December 1st the left loin was opened by the usual incision, the adipose tissue around the kidney broken up, and

Renal calculi (less than natural size).

a stone detected by the touch in the pelvis of the organ. On opening the pelvis, a considerable quantity of offensive pus and urine escaped. The stone proved to be one of great magnitude, not only filling up the pelvis of the gland, but sending prolongations into the infundibula (*a*). After its abstraction, a second concretion (*b*) was detected in the ureter, and removed, the two weighing 473 grains. A large sized drainage tube was introduced through the wound into the pelvis of the kidney. After washing out the parts thoroughly with a solution of the mercuric chloride (1 to 1000), the incision was closed by two rows of sutures, the deep ones, consisting of catgut, brought together the lumbar aponeurosis, and the superficial ones, of silkworm-gut, inclosed the integument, subcutaneous tissue, and muscles. The external dressing was composed of the ordinary antiseptic materials. A portion of the drainage tube was removed on the thirteenth day, and the remainder on the nineteenth day. On the thirteenth day, the patient was allowed to sit up in bed, and on the eighteenth day was moving about his room. From the time of the operation until he left the hospital for his home, he was literally without an untoward symptom.

SIX CASES OF INJURY TO THE SHOULDER, FOLLOWED BY PARALYSIS.

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PARALYSIS of the arm following injuries about the shoulder-joint has long excited the interest of both surgeons and neurologists. In those instances where luxation has occurred, stretching or laceration of the branches of the axillary plexus is usually assigned as the cause of the paralysis, but cases are met with in which the humerus has not left its socket, and yet paralysis of the arm of very serious nature follows a blow. To account for this it is necessary to look to something else than the head of the humerus. It is possible that the brachial plexus may be bruised by forcing the clavicle upon the first rib, at which position the nerve trunks are liable to be compressed.

The first of the following cases seems to be a good illustration of this affection.

CASE I.—Peter R., æt. fifty-nine, was admitted to the Infirmary, April 15, 1887, under the care of Dr. S. Weir Mitchell. He was perfectly well before the present trouble. Fourteen months previously he fell down a flight of eight steps, and struck the point of the left shoulder on the leg of a turning lathe. He was unconscious for a few moments. The arm instantly became useless, but was not painful. Sensibility was lost from the fingers up to the neck. It was a month before he could bend the fingers; he then could move them slightly. Apparently all the cords of the brachial plexus were affected. There was no dislocation or fracture of any bone.

Fourteen months after the accident the condition was as follows: *Motion:* Can pronate the forearm, but cannot supinate completely. The fingers and hand are normal; grip powerful. Extension of the arm: triceps, fair; biceps, nil; pectoral muscles, fair: suprascapular, infrascapular, and deltoid, nil. Trapezius and levator anguli scapulæ, fair. The wasted condition of these muscles and the apparent luxation of the shoulder-joint are very noticeable. Two fingers could be laid in the sulcus between the clavicle and head of the humerus. *Sensation* unim-

paired. Faradism produced in the deltoid only slight fibrillar contraction; in the infra- and supra-scapular, nothing. In the pectorals, trapezius, levator anguli scapulæ, rhomboid, latissimus dorsi, and triceps, a good response. Galvanism produced no action in the scapular muscles. In the triceps it was lessened, but no serial alteration.

Galvanism was ordered three times a week, eighteen to twenty milliampères, with daily massage; a hypodermatic injection of one-fiftieth grain of strychnia was given every other day. The arm was also placed in a sling, with a rubber supporting band, so as to hold the humerus up and relieve wasted and fatigued muscles. It is proper to say that galvanism and strychnia had been given him during several months of previous treatment at the University Hospital Dispensary for Nervous Diseases.

Three months in the wards of the infirmary, and five months attendance at its dispensary have done a great deal for this man. At first he could not use his fingers; could hold nothing in his hand; he could barely move them. His grip was very weak. He is now able to dress and feed himself, and the motions are greatly improved, though the supra- and infraspinati, biceps and triceps, are much wasted. Burq's dynamometer shows sixty-three in the right hand, and fifty-three in the left. The arm has gained three-eighths of an inch in circumference in the last three months.

CASE II.—P. E. C., æt. sixty-six, a clerk, was admitted to the hospital June 13, 1887, under Dr. Osler. He was injured eight weeks previously in an altercation in which two men fell upon him, and the right shoulder was dislocated. This was restored after twenty-four hours under ether by traction with the foot in the axilla. For this purpose, the operator's shoe was removed. No bones were broken; the shoulder was swollen, and extremely painful. A Velpeau dressing was applied for ten or eleven days. Motion of the fingers and of the hand was completely lost at the time of the accident, and has never been restored. The forearm could be moved a little after the accident, but motion is now lost. The arm cannot be moved freely.

Electrical examination. Faradic current: no response in any of the muscles of the arm, except in the triceps, where it is moderate, and in the extensors and flexors of the carpus, where it is slight. *Galvanic current:* reaction of degeneration marked in the deltoid and biceps, also in the extensors and flexors of the forearm. In the latter muscles it is very slight.

Pain is now present in the arm, especially so when the patient is overheated. The fingers are swollen and œdematous.

Dr. Osler directed massage and a descending galvanic current to be applied. At the end of one week, the reaction of degeneration remained. At the end of six months, motion is greatly improved, and all the muscles have increased in size. The œdema has entirely disappeared.

CASE III.—Perry M., of Ontario, æt. nineteen, applied at Dr. Osler's Clinic in September, 1887. Two and a half years previously he was struck by ice falling from a roof. The blow was received on the back and left shoulder. He was unconscious for fifteen minutes. A surgeon who examined him said that no bone was broken, but the left clavicle was dislocated at the sternal end, and touched the right clavicle. The skin was not broken or bruised. The patient became delirious, and was very ill. Sensation was entirely lost at first, but is now partially restored. He has never used the arm since. Motion is very slight in the biceps, in the deltoid it is gone; the pectorals move slightly. The fingers can be very slightly flexed. The wasting of the shoulder-girdle muscles and forearm and arm is extreme.

Electrical examination shows a slight response to faradism and galvanism.

CASE IV.—Wm. D., æt. forty-eight, applied for treatment three or four weeks after a fall, in which his left arm was under him. This gave him pain in his elbow and shoulder for one week; after this he lost power in the wrist and hand. On application, the arm and shoulder were found greatly wasted. He had great difficulty in placing the hand on the back of the neck, and was unable to extend the wrist or the thumb. A slight tap, however, over the musculo-spiral nerve caused extension of the wrist, and the slightest tap over the deltoid caused fibrillar contractions. The patient had pain on the right side of the cervical spine, extending up to the head. Wet cups were applied to the back of the neck and over the painful nerves every other day for a week. Three or four ounces of blood were taken each time. A blister, three by four inches, was then applied to the cervical spine.

In one week, the patient was able to extend the wrist better than before. At the end of two weeks, the cautery was applied to the neck, and ten grains of iodide of potash were given *t. i. d.*, and the patient continued to improve.

CASE V.—Hugh G., æt. sixty, under Dr. Sinkler. While carrying two buckets of water five or six months before applying for treatment, fell, striking his right shoulder and wrist. No bones were broken. The limb remained swollen and painful for three or four weeks, and was painful at the time he came to the hospital. The forearm and hand during the previous two months had wasted.

On examination, the muscles of the hand, forearm, and arm were found to be decidedly atrophied. All the movements of the arm, forearm, and wrist were preserved: the latter movement caused pain. Flexion and extension of the fingers were stiff. He could make a fist. The fingers were contracted and could not be extended fully. He could not abduct or adduct the fingers or thumb. Loss of sensation to compass points in all fingers. He localized sensation well. There was hyperæsthesia of the palm of the hand. Dynamometer: R. 60; L. 100. The electrical conditions were as follows: Lessened reaction to galvanic and faradic current in the right forearm; normal in kind. In the hand, no reaction to faradic current. The anodal opening and cathodal opening contractions were not obtained. The anodal closing was slightly greater than the cathodal closing contraction. The galvanic current was ordered three times a week.

CASE VI.—Thomas H., fell about fourteen feet, three months before applying at Dr. Sinkler's Clinic for treatment. He struck on his head, cutting it, and bruising his shoulder. A scar, one inch in length, was seen over the left parietal bone. Consciousness was lost for half an hour after the accident, after which paralysis of the left arm and left side of the face was observed.

At the end of six weeks the face was much improved, although shortly after the accident the left eyeball became apparently shrunken, and withdrawn into the socket. One month later pain occurred in the ulnar distribution of the left arm, extending gradually to the extremity. At the same time a "shivery feeling" was experienced down the left arm, if the left side of the face and ear were particularly twitched. At the time of examination, pressure made over a sensitive spot just above the sternal end of the clavicle, caused a thrill in the hand and arm. Severe pressure caused pain.

The following condition was recorded by Dr. Sinkler: On inspection the arm and shoulder were much atrophied. The head of the humerus gave the *appearance* of dislocation. The deltoid was gone; the pectorals much wasted. There was a patch of anæsthesia two inches above the elbow, covering an area five by two inches, on the external aspect of the left arm. Hyperæsthesia of the surface over the pectoral muscle; no sensation below the elbow. The hand appeared shiny. A tap over the muscles of the arm and forearm caused a reflex; over the pectoral, pain. A water blister had appeared on the outer surface of the end of the middle finger. The left arm was hotter than the right; there was no spot painful to pressure on the arm. A needle prick on the outside of the arm causes a small cup of goose-flesh around the prick, and bleeding is slow. A prick on the end of the fingers bleeds occasionally, although the hand is congested. After a few minutes the point where the needle was inserted presented the appearance of a small wasp sting.

The treatment which Dr. Weir Mitchell relies upon in all of these cases of atrophy and muscular paralysis consists of galvanic or faradic electricity, manipulation, and alternate hot and cold douches, with a subcutaneous injection of strychnia, one-sixtieth of a grain, so that the groups of spinal ganglia, which have long been inactive, may be given a special increase of irritability. It is not necessary that the injection should be made into the palsied muscle.

Electricity may be employed so soon as the acute symptoms attendant on the accident have abated. By this agent nutrition is maintained; a fresher and larger blood-supply is brought to flaccid muscles than if left to voluntary movement. The current to be chosen is the one which best moves the muscles. The galvanic current interrupted or reversed rapidly in the strength of six to ten milliampères will, in bad cases, have to be depended upon when faradism fails. Even in these cases, after a course of galvanic treatment, the muscles may be found to be responsive to a strong induced current, which may then be substituted. A faradic battery, though apparently without power to move a single palsied muscle, may yet do great good, if patiently used. Daily applications of the primary current for from fifteen to thirty minutes will often increase the bulk and warmth of a limb before irritability of the muscles is perceived, and should encourage to further effort.

At the outset, when the reaction of degeneration is met with, or when no reaction at all obtains, everything should be done to favor contraction. The tissues themselves may be soaked in warm salt water, and while yet warm, the electrodes covered with absorbent cotton moistened in hot salt water, should be applied. In this way the skin is reddened, conduction becomes easier, and the muscle response improves. Pain would be an indication for the use of a lesser current, and if neuralgia should supervene, electricity would have to be suspended for a time. This, however, would be an encouraging sign.

Nélaton, who has described this class of cases, took a very unfavorable view of them, but with better means at our command much more can be accomplished than in his day.

ARACHNOID CYSTS OF THE BRAIN.[1]

BY EDWARD T. BRUEN, M.D.,
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CASE I.—Mary C., æt. thirty-two, died in the Philadelphia Hospital September 21, 1887.

Autopsy.—On removing the dura mater, four cysts were found situated upon the cortical portion of the brain. There were two cysts on each side of the median fissure; those on the right side were irregular in shape, and each somewhat larger in size than a walnut. They were situated mostly over the occipital lobe, but the outer one particularly extended over a portion of the parietal lobe. On the left cortex, the cysts were much larger; the one close to the longitudinal fissure partly covered the occipital and parietal lobes, and was three inches in length by an inch in diameter. The outer and smaller cyst occupied a position over the occipital lobe, but extended somewhat over the parietal lobe. The walls of the cysts were composed of thin lamina of membrane, and contained a clear fluid.

Owing to the pressure occasioned by the cysts, extensive atrophy of the convolutions of both occipital lobes had occurred, but upon the left side the convolutions of the superior portion of the parietal lobe had been decidedly involved in the atrophy consequent upon the pressure. This process was so marked that the surface of the left cerebrum was depressed half an inch below that of the right, and the entire left hemisphere occupied by the cysts appeared distinctly smaller. The close

[1] Read at the College of Physicians of Philadelphia, January 4, 1888.

proximity of the cysts upon the left side to the fissure of Rolando shows that the motor tract on this side of the brain must have been subjected to irritation by pressure during the development of the cysts.

This specimen has two special aspects of interest, the pathological and the clinical. Considered from the standpoint of pathology, I incline to think the cysts were congenital, because they were bilateral, and associated with marked atrophy of the cerebral convolutions.

The cysts may have originated from extravasation of blood into the sac of the arachnoid. The cause of such extravasation may be difficult to explain; but instrumental deliveries in childbirth have been supposed to share in determining this condition, and the same may be said of falls or blows received on the head in infancy.

The following case, taken from the Reports of the Norristown State Hospital for the Insane, 1885, seems an example of large arachnoid cyst from extravasation of blood:

Autopsy, eight and a half hours after death.—On raising the calvarium, which exhibited nothing unusual, two large hematomata were found, completely covering the superior aspect of the hemispheres—that is to say, they completely filled the vault of the calvarium. The walls of the sacs were quite firm, and they contained a dark bloody liquid. They separated easily from the dura, and were in no way attached to the pia. The pia was slightly opaque and thickened. The diameter of the sacs at their thickest portion was upward of an inch. The convolutions of the brain were small and shrunken. On section, the gray matter appeared thin on the upper surface of the convolutions, but normal in the depths of the sulci. The substance of the brain was firm. The lateral ventricles showed slight reddening of the ependyma.

Microscopic examination of the cortex revealed no change beyond an apparent decrease in the number of cells in some places, and a slight general increase in the neuroglia.

Arachnoid cysts are seldom observed in a recent state, and from their usually having existed for a long period before they are examined, the effused blood is found to have already undergone considerable modifications. The fluid usually is thin, clear, and serous. The walls of arachnoid cysts are commonly adherent to the dura mater by loose adhesions, and are at first brown and rough, even laminated, becoming in lapse of time smooth and polished.

The pressure of such cysts upon the cerebral hemispheres may produce atrophy of the convolutions, as in the case under consideration. The pressure of arachnoid cysts sometimes may so diminish the thickness of the parietal bones as to cause a local bulging tumor known as external, partial, or local meningeal hydrocephalus. It is possible for the entire arachnoid sac to become one large cyst. There is a specimen of this so-called external or meningeal hydrocephalus in the Wistar and Horner Museum at the University of Pennsylvania.

It is interesting to note that arachnoid cysts may contain concretions of cholesterin, cholesteatoma, and the scales may be interwoven with extremely fine microscopic hair. Even small plates of bone have been described in the walls of these cysts.

Arachnoid cysts must not be confounded with cysts due to extensive loss of substance in the interior of the brain, whether due to hemorrhage, softening, or inflammation which leads, after absorption of the detritus, to the formation of cavities which are generally filled up in part by clear or turbid liquid. This special state of the brain has been described as the Gruyére cheese condition, or état criblé, because the softening occurs in small patches, and the little cavities, when numerous, give the tissue a cribriform or sponge-like appearance.

Ziegler states that when softening has occurred round a small arterial branch, the space left vacant on absorption of the products of disintegration is often filled up by an accumulation of liquid in the adventitial lymph channel belonging to the vessel, which latter then looks as if it ran through a wide lymph-sac, resembling that caused by simple localized lymphatic stagnation or engorgement. When such cysts are large, and lie just under the pia mater, or at least not very deeply, the overlying tissue in general sinks in and leaves a sub-pial or sub-arachnoid space, which soon fills with liquid (see also monograph by Kundrat, "Porencephalie").

The chief interest pertaining to Case I. relates to its clinical history:

The patient had been the subject of occasional epileptic convulsions for twenty years. She passed four years in the Insane Department of the Philadelphia Hospital when she was twenty-four years of age, and during the last two years she has been at intervals an inmate of the wards for nervous cases in the Philadelphia Hospital. When I first saw the patient she was suffering from violent spastic contractions of the extensors of the arms and hands, legs and feet. The head was frequently violently retracted and fixed in full extension, with the face turned to the right side. The muscles of the lips and mouth were not markedly affected, but the speech was hesitating, and articulation imperfect. The spastic contractions of the muscles were not constant.

The clinical history during the four weeks she was in my wards was marked by a febrile movement of the continued type, typical of typhoid fever. The typhoid state was present, also diarrhœa. Indeed, the diagnosis of typhoid fever was entertained as the most probable interpretation of the febrile symptoms, and at the autopsy the characteristic enteric lesions of typhoid fever were discovered.

During the progress of the case, it may be noted that there was conspicuous absence of symptoms pointing to inflammatory disease of the cerebral membranes, while, on the other hand, the spastic contractions, and the retraction of the head and neck already mentioned, rendered probable the suspicion of central cerebral mischief, since local spasms, which

go under various names, such as cramps, twitchings, epileptoid attacks, athetosis or athetoid movements, are common symptoms of the morbid growths which affect the cortical motor area.

I have received from Dr. Wharton Sinkler the following notes of a case which has recently been under his care. The symptoms were so similar to those which I have described in the case which forms the basis of this paper that it seems probable that there are lesions in the same region, possibly also of a cystic character.

CASE II.—John S., æt. forty-four years, married. Occupation, "steam packer." Applied for treatment at the Orthopœdic Hospital and Infirmary for Nervous Diseases, August 29, 1887. He has always had good health except attacks of rheumatism. Denies syphilis, and says he has been temperate. About two years ago he had an attack of a convulsive nature while at work. It was attributed to excessive heat. After this attack he worked for eight or nine months, when he had another, and, after the convulsive seizure on this occasion, he continued to shake all over for several hours. Two weeks later he had a third attack, and since then he has not been able to work. The trouble was a general trembling, with unsteadiness of gait, and at times the face and left leg were more affected.

Present condition.—The patient walks with extreme unsteadiness, due to almost complete want of power of coördination. The walk is like that of an ataxic. When he attempts to walk, the arms are thrown about in various directions, and the fingers open and shut spasmodically, assuming the various positions seen in athetosis. While sitting there are occasional twitches of the left leg, but otherwise the limbs are at rest. The face, however, undergoes remarkable contortions, first one side and then the other. These spasmodic contractions of the facial muscles are most marked if he attempts to speak. The speech is much affected. There is no aphasia, but the words are jerked out in an irregular and hesitating way, but he does not use the wrong words. His mind is not impaired to a marked degree, but he is less intelligent than formerly; he is able to read; the movements of both hands are incoördinate, and he feeds himself with much difficulty. Dynamometer: R. 100; L. 50; knee-jerk exaggerated on both sides; ankle clonus present. The eye-ground was examined by Dr. de Schweinitz, and no anomalies were found.

The patient was admitted to the hospital and remained for several weeks. At first he had two or three convulsions, in which he rolled out of the bed, and was unconscious for a short time. He was given iodide of potassium in increasing doses, up to one hundred grains, three times a day. He gained flesh and improved up to a certain point, but afterward became worse. No convulsions had occurred for some time before he left the hospital.

A RARE CASE OF PAINLESS DISTENTION AND PROLAPSE OF THE BLADDER TWO MONTHS AFTER CONFINEMENT.

BY S. J. RADCLIFFE, M.D.,
OF WASHINGTON, D. C.

WITHOUT excuse for its delay, though late, I think the following unique case worthy of record. It is one of those accidental occurrences sometimes met with in practice, often quite unexpectedly, which puzzles and puts one to his wits' end for solution. On the promptness to recognize and to relieve in such cases depends always the welfare of the patient. Failure to recognize or correctly diagnose, at a sudden summons, in these emergencies might often result disastrously or even fatally.

Mrs. A., aged thirty-five years, mother of two children, in good health, was confined with her third child, Sept. 17, 1886. She had a quick, natural labor, and the child was delivered without difficulty. She convalesced rapidly, and after the usual period I left her in her ordinary health.

November 12th, following, about two months after confinement, on a pleasant fall day, in company with her husband, she walked, pushing her babe before her in a little child's carriage, some ten or eleven squares, about three-fourths of a mile, to pay a visit to a relative. On her arrival at her place of destination she was taken suddenly ill, and I had an urgent call to see her.

On my arrival I found her in an almost collapsed state. Her countenance was pale, her surface cold, her pulse small and quick, the whole body agitated as if with a chill, and she seemed to be suffering from profound shock.

She could scarcely describe her feelings or symptoms, but referred her ailment to the lower part of her abdomen. On placing my hand upon the abdomen, however lightly, she could not bear the touch on account of the pain it produced. The entire abdomen, at least to the umbilicus, was equally tender and admitted of no manipulation. I questioned her in regard to the condition of her bowels, uterus, and bladder, but elicited nothing definite. She replied as well as she could that she had been careful of herself, and had had proper attention, and she had felt no inconvenience or discomfort until now. She thought she had had a passage from the bowels, and also passed her urine that morning, but was not certain, and so far as she knew she had had no uterine trouble since her confinement.

I suggested that the only rational way to determine the cause of her illness, which was important as the symptoms were more or less uncertain, was to make an examination per vaginam, to which she willingly consented.

On attempting to introduce my finger into the vagina, the patient being on her back, it came at once in contact with a round, tense, smooth projection or tumor, slightly elastic and of uniform outline, completely filling the mouth of the vagina to the vulva, by separation of which it could be easily seen. I was not certain at first whether it was the walls of the vagina in a prolapsed state dragging

some organ with it, as the uterus, or the uterus itself, in a condition of prolapse pressing down upon it; an abscess, or hæmotocele, or other extravasation, or even a hernia of the bowels. I could pass my finger only at the posterior aspect by pressing down the perineum, and by keeping my finger in that position and gently pressing upon the abdomen in a wave-like motion; above the symphysis pubis I found the impulse communicated to the tumor, and my finger, and after several trials I concluded it must be cystic, probably a distended and prolapsed bladder due to dysuria from partial or complete paralysis of either the bladder or sphincter vesicæ, or both.

There was no dribbling, or any evidence of the passage of urine and the urethral orifice was intact. The parts contiguous to the meatus were not swollen or painful to the touch, and there was no evidence of diseased structure anywhere discovered by the closest inspection.

I at once introduced a long, soft elastic catheter into the bladder, and the diagnosis was verified directly by the passage of a full stream of urine, and I drew off two-thirds of a large china basinful of dark, amber-colored urine, probably two quarts or sixty-four ounces, free from bad odor, and appearing to be of recent accumulation. After the discharge the tumor subsided completely, admitting my index finger freely into the vagina, and permitting an examination in any direction, which revealed no other displacement, and showed only a dilated condition of the anterior wall of the vagina.

The most pressing symptoms now disappeared, warmth returned to the body, the pulse increased in strength and volume, she could bear more readily pressure upon the abdomen, and in a short time she was free from pain or distress. I enjoined her to keep quiet; gave her some quieting medicine, containing morphia and potassium bromide in camphor water, and left her quite comfortable.

I saw her again the same evening, and as she had not voided her urine, I introduced the catheter and evacuated about two ounces.

She had not perfect control over her bladder for something like a week after her attack, and I was obliged to repeat the catheterism each day for the first few days twice daily, and after that once daily, and when I discontinued my visits I left the catheter with her, as she had learned to use it herself, and I directed her if she felt any lengthy continuance or retention of urine to use it or send for me. She had no further trouble, however, or necessity for its use, and seemed to recover from the affection completely.

The points of interest presented in this case are: the painless and apparently sudden distention of the bladder, almost to the stage of rupture, without giving distinctive warning of such a condition; the great and persistent shock to the general system it produced, and the relation existing, if any, to the recent confinement of the patient.

It is a matter of great surprise or wonder that in the midst of apparent good health, at least without any show of depreciated vitality, and in a sound condition of the organ itself, the bladder could have so filled, possibly by gradual additions, or it may have been by rapid secretion, until it had measured its utmost capacity, even to the verge of rupture, without giving sooner some decided evidence of its impending danger.

At the birth of the child there was no delay in the passage of the head through the lower strait, and consequently no great amount of pressure upon the neck of the bladder, or injury to the soft parts along its course. There was nothing during her lying-in or getting-up indicating any disturbance of its function. She thought she had attended to herself and to its evacuation daily, and felt no unpleasant symptoms or discomfort in doing so. The first ill feeling she had of any kind was the sudden shock she felt after her long walk, but which she did not refer particularly to the bladder. She said she then had an indescribable feeling of exhaustion, sinking or fainting and would have fallen if she had not been supported.

There was no stricture of the urethra or prolapse of the uterus, and no other pressure to obstruct the flow of urine.

It is possible that inattention or negligence of her duty to herself that morning, with the long, fatiguing walk, and a somewhat relaxed condition of the system, and probably also, in addition to the fatigue, an overheated state of the body, constituted some of the factors in the case, or at least were some of the exciting, if not the remote, causes of the trouble.

Excessive exercise, we know, increases the secretion of urine by the kidneys. This is a physiological fact, demonstrated by frequent experiments. Disassimilation is then more active, and consequently a greater effort is made to get rid of the effete, azotized matters which the blood takes up during the process of disintegration. This is, of course, governed in a great measure by the state of the circulation, the amount of blood-pressure, the condition of the nervous system, and the amount of transpiration, and also by the quantity of fluid taken.

The true pathological condition was an over-distended bladder, producing paralysis by distention, and inability to contract on itself or its contents; but what brought about this condition it is difficult to determine, however much one may surmise.

The shock was no doubt caused by or due to the generally lowered or depressed vitality at the time, it may be to the fatigue of the patient, and to the immediate disturbance or impairment of a vital function—the impression being made through the sympathetic system, or by reflex action, and involuntary in its nature; familiar examples of such reflexes are often presented, as in the often repeated one of simply introducing a catheter. The relation of the recent confinement to the case could hardly

be considered important, as its remoteness, and doubtless complete recovery from that state would possibly preclude consideration. A very important item to be considered in the case was the diagnosis. Any delay or failure in recognizing the state of the patient would have resulted in rupture of the bladder. In her complicated condition this was a very nice point, and called for prompt action.

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MEDICAL PROGRESS.

Antipyrin in Hay Fever.—DR. ADOLPHE BLOCH, formerly physician to the Havre Hospital, has used antipyrin with excellent results in a case of spasmodic rhinitis (hay fever). The patient was a man aged thirty-three, who complained of cold in the head, from which he had suffered for two years. The affection manifested itself, in the morning on rising, and in the afternoon when the window was opened, by painful attacks of sneezing, with a copious discharge of watery mucus. There was severe itching and pricking in the eyes, which watered incessantly; and pain in the head over the frontal sinuses. These symptoms completely disappeared during the intervals between the attacks. The throat and the nasal fossæ were normal. On July 6, 1887, 30 grains of bromide of potassium were prescribed; these were administered daily, morning and night, in syrup of orange-peel. From July 18th one pill, containing ¼ of a grain of extract of belladonna, was given every morning. The interior of the nose was constantly painted with a solution of hydrochlorate of cocaine (one to thirty parts of water). This treatment was continued for a week. The affection disappeared for two days, but subsequently reappeared. The dose of extract of belladonna was then administered twice daily. Ten days later, finding this treatment did not produce satisfactory results, M. Bloch ordered 30 grains of antipyrin daily at the hours at which the attacks usually came on. After the first dose the affection ceased. During eight days only two slight attacks occurred. The treatment was discontinued for six days, during which there were no attacks; it was then resumed. During twenty days only two slight attacks occurred; 15 grains of antipyrin were then administered daily before breakfast. The treatment was discontinued from September 20th to October 3d. On November 8th the patient stated that the hay fever had disappeared since the early part of October, although he had ceased to take antipyrin. M. Bloch considers that the anæsthetic action of this substance was not confined to the sensory and secreting nerves of the nasal fossæ; it is highly probable that the special action of the antipyrin on the encephalic nerve centres caused the hyperæsthesia of the Schneiderian mucous membrane to disappear.—*British Medical Journal*, January 7, 1888.

The Value of Salol.—The *British Medical Journal* of December 24, 1887 writes as follows regarding the value of salol:

According to the most recent observations the principal effect of the administration of salol is to produce a marked and immediate remission of the pain in cases of acute rheumatism. Its effect on the temperature, however, is less marked than that obtained by means of the salicylate of sodium, and the relief afforded is of much shorter duration. In fact, unless the patient is kept well under the influence of the drug the suffering returns in its original intensity. Salol is, to all its intents and purposes, innocuous, and is said never to give rise to toxic symptoms. Even the discomfort which not infrequently follows the internal administration of salicylate of sodium has not been observed with salol. Hence, whenever the use of the former drug is contraindicated, salol will be found both useful and reliable. The best effects were obtained with it in the treatment of subacute rheumatism, and the patients soon learn to appreciate the relief which follows its administration. Salol is insoluble in pure water, but is slightly soluble in organic liquids of alkaline reaction. It is best given in the form of compressed tablets, pills, or in an emulsion.

Salol, for External Application.—Salol collodion;

Salol	ʒ i.
Etheris	ʒ i.

add

Collodion. flex.	ʒ 7½.

Especially useful for excoriated nipples.

A salol ointment for burns:

Ol. oliv.	ʒ 15.
Salol	ʒ 2½.
Aq. calc.	ʒ 15.

—*Centralblatt für die Gesammte Therapie*, January, 1888.

Ovaroclasia.—From *Gazetta degli Ospitali*, No. 70, 1887, we learn that PORRO has devised an operation in which he crushes or destroys ovarian tissue in cases where the removal of the ovary is contraindicated. It has been successful in several cases.

Paraplegia from Disease of the Urinary Organs.—ETIENNE concludes his study of this subject as follows, in the *Revue Gén. de Clinique et de Ther.* of December 22, 1887:

In the course of an acute affection of the urinary organs disturbances of motion and sensation in the lower extremities may occur at any time. Such cases are rare; and in the great number of cases the lesions of the urinary organs are not a cause but a consequence of nervous disease. These cases occur most frequently in the neurotic.

Two Successful Extirpations of the Larynx.—DEMONS, of Bordeaux, reported at a meeting of the Paris Academy of Medicine on December 20, 1887, two cases of extirpation of the larynx for cancer. The first, a partial exsection, was performed in May, 1887, and the second in June, 1887. Up to the date of meeting the patients were without inconvenience and in good health. They were not using artificial larynxes.—*L'Abeille Médicale*, December 26, 1887.

Salt in Milk for Children.—JACOBI, in the *Archives of Pediatrics* for January, 1888, writes that the physiological

effect of chloride of sodium is very important, no matter whether it is directly introduced through the mother's milk, or added as a condiment to cow's milk, or vegetable diet. Both of the latter contain more potassium than sodium, and neither ought ever to be given, to the well or sick, without the addition of table salt. A portion of that which is introduced may be absorbed in solution; another part is, however, broken up into another sodium salt and hydrochloric acid. Thus it serves directly as an excitant to the secretion of the glands and facilitates digestion. Therefore during diseases in which the secretion of gastric juice is interfered with, or in the beginning of convalescence, when both the secreting faculties and the muscular power of the stomach are wanting, and the necessity of resorting to nitrogenous food is apparent, an ample supply of salt ought to be furnished. The excess of acid which may get into the intestinal canal unites with the sodium of the bile in the duodenum, and assists in producing a second combination of chloride of sodium, which again is dissolved in the intestines and absorbed. Its action in the circulation is well understood: it enhances the vital processes, mainly by accelerating tissue-changes through the elimination of more urea and carbonic acid.

A very important fact is also this: that the addition of chloride of sodium prevents the solid coagulation of milk by either rennet or gastric juice. Thus cow's milk ought never to be given without table salt, and the latter ought to be added to woman's milk when it behaves like cow's milk in regard to solid curdling and consequent indigestibility.

Habitual constipation of children is also influenced beneficially, for two reasons: not only is the food made more digestible, but the secretions of the alimentary canal, both serous and glandular, are made more effective by its presence.

The Isolation of School Children Suffering from Contagious Diseases.—OLLIVIER, in *Gazette Heb.* of December 30, 1887, advises that children suffering from variola, scarlatina, and diphtheria be isolated for forty days; those suffering from varicella and measles for twenty-five days. He advises two full baths with soap for each convalescent, and the thorough disinfection of clothes and rooms; children should not be admitted to schools without clean health records, signed by physicians.

Obstetric Cones.—Since the local anæsthetic properties of cocaine have been discovered, among the many purposes for which it has been applied is that of relieving the earlier labor pains by painting with it the os uteri in primiparæ, or when the os is rigid; but in order to do this adequately, the use of a speculum is necessary. The obstetric cones recently made do away with this difficulty. They are hollow, made to fit the index finger, and can thus be very readily applied to the part desired. They are made with one, two, or three grains of cocaine, the excipient being oil of theobroma, and they also contain three grains of boric acid. The excipient itself acts as a lubricator to the parts. Therapeutically they fulfil their purpose very well, and from a pharmaceutical point of view they seem to be incapable of further improvement.—*British Medical Journal*, January 7, 1888.

Digital Divulsion of the Pylorus.—From *Gazzetta Degli Ospitali* of December 25, 1887, we learn that BRICHETTI has recently performed digital divulsion of the pylorus for stenosis of extreme degree. The operation lasted about forty-five minutes. The stomach was closed by Lembert sutures, and the abdomen was sutured by deep and superficial stitches. Strict antisepsis was observed, and when the report was made, twenty-four hours after the operation, the patient's condition was good.

A Prescription for Asthma.—PROFESSOR BEAUMETZ prescribes:

Potass. iodid.	ʒ 3¼.
Tinct. lobeliæ	ʒ 3¼.
Aquæ destil.	ʒ 7¼.

M. S.

A teaspoonful or tablespoonful may be taken, in a glass of beer, at meals.—*Journal de Méd.*, December 25, 1887.

Sulphide of Carbon in Elephantiasis.—In the *British Medical Journal* of December 24, 1887, appears a letter by DR. P. D. ANTHONISZ, of Ceylon, giving the results of the use of sulphide of carbon in elephantiasis, both acute and chronic, as tried by himself and a few of his medical friends. In some of the acute cases, the reduction of swelling was prompt and complete, in others it was gradual but satisfactory. In one, a case of thirty years' standing, a year's treatment, begun when the legs were as large as the man's waist, left them about the size of his thighs. The dose mentioned in the latter was two two-grain pills per diem, to be continued for a lengthened period, except when the drug irritates the stomach, as it will do from time to time. When the ill effects have passed, the medicine should be renewed. The writer adopts the theory proposed by Dr. Manson, of Amoy, some years ago, that the disease is due to the presence, in the blood, of the *filaria sanguinis hominis*. He believes that the remedy is efficient by reason of its sulphur ingredient and its power to prevent the parasite from multiplying in the body; which, according to Dr. Manson, it does with amazing rapidity. It will be remembered, that in accounting for the presence of the filaria in the blood, the theory of Dr. Manson included the novel proposition that the mosquito might carry in the parasite with his proboscis, and deposit it in tissues whence access to the blood could readily be obtained.

A Needle Ten Months in the Larynx.—VÁMOSSY reports the case of a tailor who consulted him in December, 1886, for relief from a needle and thread which he had swallowed while at his work. Examination of the larynx showed a dark body on the edge of the left vocal cord, which was removed by forceps, and proved to be a bit of black thread. The irritation and cough were relieved, and the patient dismissed.

The physician heard nothing from the patient until November, 1887, when he returned, bringing a rusted needle, about one inch long, without an eye, which he had coughed up a few hours before. The reporter considers it probable that the needle had been retained in one of the ventricles of Morgagni.—*Wiener med. Presse*, No. 52, 1887.

Resorcin in Laryngeal Tuberculosis.—DR. M. A. FRONSTEIN, of Moscow, writing in the *Russkaya Meditsina*, on

resorcin in laryngeal tuberculosis, states that he has found that this substance, though not so powerful a local anæsthetic as cocaine, acts more satisfactorily in allaying the pain and distress caused by laryngeal ulceration of tuberculous origin. In out-patient practice he applies a 10 per cent. solution, and if after a minute or so the pain is not decreased, he repeats the application, using a 20 per cent. solution. He then gives the patient a supply of this latter solution and a brush, and teaches him to apply it himself, the situation of the most painful spot being his guide. As a rule, patients can manage the application pretty well, as the ulceration is usually situated on the arytenoids or on the edge of the epiglottis, localities tolerably easy of access. Where possible, of course, the operation should be performed by a medical man with the aid of the laryngoscope. In addition to these direct applications, a spray containing 2 per cent. of resorcin is used several times a day. Under this treatment considerable improvement was usually manifest, and sometimes, when cocaine was substituted for resorcin, the patient would beg that the first remedy might be given him again, as the change had not suited him. Another advantage resorcin has over cocaine is its comparative cheapness, the price being only about 1*s.* per ounce, whereas the hydrochlorate of cocaine is still 5*s.* a drachm.—*Lancet*, January 7, 1888.

The Doses of the Alkaloids.—At a recent meeting of the Paris Pharmaceutical Society, BENOIT urged that uniform preparations of strophanthin, digitalin, and aconitin be employed, and that the scale of dosage be upon $\frac{1}{10}$th of a milligramme (about $\frac{1}{600}$th of a grain). He proposed the following formulæ:

For digitalin—

Digitalin	gr. ⅙.
Sacchar. lact.	ʒ 1.
Acaciæ pulv.	grs. 15.
Syrup. acac.	q. s.

To be made into 100 granules.

Aconitin may be prepared as follows:

Aconitin. nitrat.	gr. ⅜.
Sacchar. lact.	ʒ 1.
Gumm. acac.	grs. 15.
Syrup. acac.	q. s.

Which may be made into 100 granules.

It is suggested to color granules of substances especially dangerous.

(The dose of aconitine is different, according to these formulæ, from that of digitalin.)—*Journal de Méd.*, December 25, 1887.

The Prevention of Ophthalmia Neonatorum.—In a Prize Essay, published in the *Manchester Chronicle* for January, 1888, MULES advises the following measures for preventing ophthalmia neonatorum:

(1) Cure of all cases of chronic vaginal discharge before labor by suitable local applications.

(2) Irrigation of the vagina during the second stage of labor when vaginitis is known to exist. The plan, adopted in London, at Queen Charlotte's Hospital, is almost uniformly successful. The solution in use is hydrarg. corros. sublim., 1 part to 2000. Nature has herself indicated this method by copiously secreting a clear vaginal fluid before and during labor, and the rush of liquor amnii immediately preceding birth; the action of these fluids is more than mechanical, for experiment proves that a freely diluted blennorrhœal secretion is non-infectious, although, to be with certainty innocuous, it should not be more than 1 per cent.

(3) By assisting the fœtal eyes to pass beyond the perineal edge without resting. This is easily done by hooking the finger round the perineal edge and drawing it down.

(4) By wiping the eyes with a clean cloth at birth of head.

(5) By instilling an antiseptic solution into the child's eyes at birth, *if the mother is known to have vaginal discharge*. To do this in all cases is unnecessary. Credé's method—solution used, argent. nit. 2 per cent.

(6) To wash the face first, never in the water in which the body has been cleansed.

(7) To retain one sponge or flannel specially for the child's face, and to insist on scrupulous cleanliness.

(8) The nurse to wash her hands after adjusting the mother, before touching the child.

(9) Not to expose unduly the child to bright light, draughts, etc.

(10) To protect the child from flies, with a thin veil.

(11) To remove carefully the child from the immediate vicinity of another similarly attacked. (General isolation.) I cannot too forcibly reiterate that "ophthalmia neonatorum" is an infectious disease, and all medical officers or superintendents of crèches, workhouse schools, or hospitals, should treat it as such, and remove the infected child to an isolation ward at once.

(12) To guard the one eye if the other is affected. (Special isolation.) This is very difficult in infants, and depends entirely on the care and intelligence of the nurse, the constant removal of discharge, and the general watchfulness which cannot be defined.

Creasote in Phthisis.—HOFMANN, in the *Berliner klinische Wochenschrift*, No. 52, 1887, reports that he has prescribed creasote in liquid form, *well diluted*, advising a half or a whole wineglass of water to be taken with the dose. He believes that patients bear the liquid form of administration better than the solid, as less gastric irritation ensues. He has combined creasote, gtt. ¾, with balsam of tolu, in capsules, with advantage.

Penetrating Gunshot Wounds of the Chest.—DR. GOUZIER has published some observations and statistics regarding the penetrating gunshot wounds of the chest occurring in the French expeditions to Formosa and Tonquin in 1883–85. From his work we gather that such wounds showed a mortality of 10 per cent., which is only about a sixth of that due to similar wounds in recent European wars and in the American war. Apparently, as he suggests, the general employment of antiseptic methods was the cause of this great amelioration. Chest wounds from revolver balls of seven millimetres in diameter generally proved comparatively harmless. Traumatic pleurisy and pneumonia usually terminated favorably, but hemorrhage, empyema, and compound fracture of the ribs gave much more serious results. He found that the best practice was not to explore unless it was necessary to extract the ball, and not to attempt extraction unless the ball was just beneath the skin or was setting up dangerous complications. In ordinary cases he found the best plan was

to close the wound antiseptically; but if there was empyema, to make a counter-opening and to wash out and drain the pleural cavity. Warm antiseptic baths were also found very useful in Tonquin.—*Lancet*, January 7, 1888.

The Treatment of Bleeding Hemorrhoids.—BUCHHOLTZ prescribes:

Alum. pulv.	grs. 45.
Ext. rhatan.	grs. 45.
Conserv. rosar.	grs. 90.
Catechu pulv.	grs. 90.
Syrupi	q. s.

M.—Ft. pil. 60 in num.—Sig.

Two pills at night and morning.—*Les Nouveaux Remèdes*, December 24, 1887.

Tribromphenol, an Antiseptic.—In the *Deutsche medicinische Wochenschrift* of December 29, 1887, GRINEM reports his experience with this substance as follows: It is a combination of bromine with phenol, and is a white, crystalline powder, very insoluble in water, easily soluble in alcohol, ether, chloroform, and other similar liquids. It is but little dissolved by glycerine, carbolized solutions, and dilute spirits of wine.

It is dissolved by the intestinal secretions, combines with sulphuric acid, and appears in the urine as a sulphuric compound. It is not escharotic, but powerfully stimulant to granulations; it does not attack the unbroken skin.

It was used in gauze dipped in 2½ per cent. solution, with good results, in tamponing wounds and cavities; it is well adapted as a stimulating tampon for abscess cavities, but should not be used in the pharynx, mouth, or nares.

In experiments upon bacterial cultures a 1 per cent. solution sterilized septic matter in thirty minutes; in 3 to 1000 solution it sterilized gelatine cultures. A small quantity added to urine prevented decomposition. The writer gave this substance in three doses of 1½ grains each, to a patient suffering from tænia, with good results; the whole was given within an hour and a half. Personally, he took as much as 15 grains in twenty-four hours; the only effect being a slightly uncomfortable feeling in the abdomen, and an unpleasant taste.

The use of this substance seems indicated to stimulate granulations; and, by virtue of its insolubility in acids and its solution in alkalies, as an intestinal antiseptic.

Resorcin in Cancer.—The *British Medical Journal*, states that resorcin has been used with excellent results in the treatment of cancerous growths on the face, in the form of an ointment containing equal quantities of resorcin and vaseline. This mixture is applied first; an ointment containing 20 parts of resorcin to 30 parts of vaseline is then applied. The ointment forms eschars on the surface of the growth. These eschars fall off when pure or iodoform vaseline is applied; fleshy granulations subsequently appear, and healthy cicatrization rapidly follows.

Saccharin in Emulsions.—The *American Druggist* for January, 1888, gives the following formulæ for emulsions, with saccharin:

The flavoring and preservation of emulsions ought not to be overlooked. Although an emulsion may be therapeutically and mechanically perfect, it is often nauseating to the taste and offensive in odor. Flavoring, though only an adjunct, still does contribute elements of value to a medicine. The common favorites among flavors are those used in cookery, such as the volatile oils of almond, cinnamon, cassia, cloves, lemon, the essence of vanilla, and orange-flower water. My opinion of these as regards permanency, palatability, and power to disguise is in favor of almonds. An elegant cod-liver oil emulsion is made as follows: (The weights and measures are British.)

Cod-liver oil	4 ounces.
Powdered gum acacia . . .	1 ounce.
Oil of cassia	4 minims.
Oil of almonds (volatile) . .	4 minims.
Saccharin	2 grains.
Water to make	8 ounces.

Mix the oils with the gum and saccharin in a dry mortar, add 2 oz. of water, stir till the emulsion is formed, finally, add sufficient water to make 8 oz., then mix well.

Castor-oil is well disguised in the following formula:

Castor oil	1 ounce.
Powdered gum acacia . . .	3 drachms.
Oil of almonds (volatile) . .	2 minims.
Oil of cloves (volatile) . . .	1 minim.
Saccharin	1 grain.
Water to make	4 ounces.

Mix the oils with the gum and saccharin in a dry mortar, add 4 drachms of water at once, stirring till the emulsion is formed, dilute to 4 oz. with water.

Having saccharin at our disposal provides us with a useful substitute for sugar in emulsions. Its advantages are that it adds nothing to the thickness of the product, and cannot give rise to fermentation. The method found most convenient for using saccharin is a 10 per cent. solution made by adding bicarbonate of sodium till effervescence ceases; 20 grains of saccharin take 8 grains of the soda salt.

To keep emulsions for long periods is not desirable; they are best freshly made. Should it be desired to preserve them, recourse must be had to such antiseptics as boric or salicylic acid, or, better, perhaps, a simple tincture of benzoin, or even pure chloroform. The latter is a most powerful antiseptic, imparting an agreeable sweetness; 1 minim may be added to each ounce of emulsion.

Hyoscin may be conveniently administered in

Hyoscin. hydrobrom. . . .	gr. ⅙ to ⅓.
Aq. destill.	ʒ 17½.
Syrup. aurant. cortic. . . .	ʒ 7½.—M.

Sig.—Dose one teaspoonful.

—*Deutsche med. Wochenschrift*, January 5, 1888.

The Care of the First Teeth.—MILLER, of Berlin, writes as follows in the *Therapeutische Monatshefte* for January, 1888:

The influence of the first teeth upon the general health of the child is as great as that of the second teeth.

The care of the first teeth should begin very early, and consists in careful cleansing, the avoidance of injurious substances, and prompt filling of cavities.

Dental operations on children should be carefully estimated in proportion to the strength of the patient, and pain should be as carefully prevented as possible. Affections of the periosteum and bones of the jaws are quite susceptible of treatment in children. The conservative treatment of the first teeth, when once decayed, is more difficult than that of older teeth. Caries of the first teeth has an unfavorable influence on the later teeth; first teeth, when diseased extensively, should be promptly removed. The extraction of the first canines should not be done too rapidly, otherwise the second teeth may be irregularly placed.

Penetrating Wounds of the Stomach and Meso-colon; Laparotomy; Cure.—At a recent meeting of the Surgical Section of the Royal Academy of Ireland, MR. BALL brought forward the case of a boy, aged fifteen, who was admitted into Sir Patrick Dun's Hospital on March 29, 1887, immediately after having accidentally stabbed himself with a half-inch chisel. The blade perforated his abdomen about half way between the tip of the ensiform cartilage and the umbilicus, and about a quarter of an inch to the right side of the linea alba. Dr. Ball saw him four hours after the injury; he was then profoundly collapsed; he vomited blood at frequent intervals, and at each effort to vomit a stream of blood spurted out from the abdominal wound. The whole abdomen was dull on percussion. An incision about three inches long was made in the middle line, between the ensiform cartilage and the umbilicus, and the chisel wound connected with it. As soon as the peritoneum was opened, a considerable quantity of blood gushed out. The stomach was found to be wounded. A clean cut existed in the great curvature, about half an inch in length; it was not bleeding. The mucous membrane, though perforated, was not prolapsed, and none of the contents of the stomach were found extravasated. The wound was sutured by passing a fine catgut suture, after the method of Lembert (but continuous), four times across the wound, only including the serous membrane; the ends were then tightly tied, thus absolutely closing the opening, and at the same time puckering up the serous membrane and bringing a considerable area on each side of the wound into apposition. The omentum was reflected upward and search made for other wounds, as copious bleeding continued. An opening in the transverse meso-colon, near its spinal attachment, could be felt with the finger; and, upon sponging away the blood, it was found that a large vein was wounded, to which, with some little difficulty, a catgut ligature was applied. The patient vomited shortly after the operation, but the vomit was free from blood. He was allowed nothing by the mouth, except small pieces of ice, for six days, and was fed by nutrient enemata of artificially digested food. From the sixth to the fourteenth day, he was allowed gradually increasing quantities of beef-tea and milk, and he then was allowed solid food. On the third day, he vomited some pieces of onion, quite unchanged, which, he stated, he had eaten the morning of the accident. Four weeks after the operation, he was discharged from the hospital quite well.—*British Medical Journal*, January 14, 1888.

Strychnia in Alcoholism. — The good results obtained from strychnine in dipsomania by N. M. Popoff, V. A. Manasseïn, Partzevsky, Tolvinsky, and Zavadsky, have induced DR. S. JAROSHEVSKY (*Meditzinskoïe Obozremiè*, No. 4, 1887, p. 332) to undertake an experimental inquiry into the antagonism between the alkaloid and alcohol. From experiments made on dogs Dr. Jaroshevsky feels justified in drawing the following conclusions: 1. Strychnine undoubtedly neutralizes the intoxicating and narcotic effects of alcohol. 2. It enables large quantities of alcohol to be taken for a considerable stretch of time without causing the usual organic lesions which follow the use of alcohol alone. 3. There are, however, limits beyond which the alkaloid itself becomes injurious to the organism. 4. Therapeutically, strychnine should be used in all forms of alcoholism. 5. It may be regarded as a powerful prophylactic against alcoholism.—*British Medical Journal*, January 14, 1888.

The Administration of Sparteine.—DEBIERRE prescribes sparteine as follows:

Aquæ	ʒ 11¼.
Aquæ lauro-cerasi	ʒ 3¾.
Syrup. simpl.	ʒ 5.
Spartein. sulph.	grs. 4½.

A teaspoonful morning and night.

In pill form sparteine may be given in

Spartein. sulph.	grs. 8.
Mass. pilul.	q. s.

M.—Ft. pil. 10 in number.

Two to four pills may be given during twenty-four hours.—*Les Nouveaux Remèdes*, December 24, 1887.

Permanent Catheterization and Forced Feeding in Œsophageal Stricture.—At a recent meeting of the Berlin Medical Society LEYDEN exhibited two patients whom he had nourished by introducing a canula as large as a goose quill into an œsophagus contracted by cancer, through which forced feeding was carried on. Attached to the canulæ were threads of silk, which were fastened over the ears, and prevented the canula from going into the stomach.—*Therapeutische Monatshefte*, January, 1888.

The Prophylaxis of Diphtheria.—JOHANNSEN, of Libau, has used with excellent results a clear, red solution of potassium permanganate as a gargle. Believing that bacteria taken into the throat during the day are very likely to multiply during the night the gargle is used before retiring. He is convinced that the procedure is rational and efficient.—*St. Petersburg Med. Wochenschrift*, No. 37, 1887.

The Antiseptic Action of Biniodide of Mercury and Potassium Iodide.—KRASSOWSKI, of St. Petersburg, reports a series of eleven laparotomies in which he used as an antiseptic equal parts of biniodide of mercury and potassium iodide in solution. Two deaths occurred, from causes not connected with the operation; in each case post-mortem examination showed union of the wound by first intention, and absence of septic inflammation. The mercurial was first used in a strength of 1 to 1000, which was progressively diminished to 1 to 4000.

Krassowski concludes that a solution of 1 to 4000 is an efficient antiseptic, and that this substance is less irritant than the bichloride, and can be applied to the integument in five per cent. solution, without producing irritation.—*Gazette de Gynécologie*, January 1, 1888.

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SATURDAY, FEBRUARY 4, 1888.

HIGH RECTECTOMY FOR CARCINOMA.

WHEN carcinoma of the rectum is seated too high to be reached from below by the ordinary procedure, and too deep to be excised through the belly, the operation of KRASKE, of Freiburg, described in the *Verhandlungen der Deutschen Gesellschaft für Chirurgie*, Bd. ii. 1855, affords the quickest and safest measure to expose and remove it, along with the perirectal tissues, should they be implicated through local extension of the disease.

The procedure, it will be remembered, consists, briefly, in making a median cut from the second sacral vertebra to the anus; severing the left gluteus maximus muscle from its attachment to the sacrum; excising the coccyx; detaching the sacral connections of the tuberososacral and spinososacral ligaments; and chiselling away the lateral mass of the sacrum in a curved line, which begins at the outer border of the third sacral foramen, and terminates at the cornu of the sacrum. The anus being now freed by a circular incision, the rectum is detached from its bed; the peritoneal cavity is opened, also, by a circular cut; the gut drawn well down and amputated above the tumor, and its end fixed by sutures to the paraänal tissues. The operation is completed by inserting a drainage tube into the peritoneal cavity, and plugging the rectum and wound with iodoform gauze.

In his first case, the disease recurred at the expiration of four months. In 7 subsequent cases in the hands of Kraske, in 3 from the practice of Schönborn, in 1 from that of Rinne, and in 1 from that of Lauenstein, the anus and lower portion of the rectum were spared, and about two-thirds of the anterior wall of the central end of the gut were united by sutures to the peripheral end, the posterior segment of the tube being left open for the escape of the feces. Of these 12 cases, 5 died, 2 of exhaustion, 1 of sepsis, 1 of peritonitis from giving way of the stitches and the entrance of fecal matter into the cavity of the belly, and 1 of iodoform intoxication. Of the 7 recoveries, 3 had fistulous openings at the expiration, respectively, of three, three and a half, and five months; in 2 the healing process was not completed until the end, respectively, of six and eleven months, from the formation of a sacral artificial anus; and 2 were recorded at the end, respectively, of one month and three months. Hence of the entire number, 38 per cent. perished, and, so far as we are aware, not a single one was permanently cured.

Although the operation of Kraske is better than the old procedure, it is open to the serious objections that the peritoneal cavity is not closed, and that the contact of fecal matter with the wound prolongs the healing process, and favors septic complications and the formation of a sacral artificial anus.

To overcome these disadvantages, SCHEDE, in a paper read last September before the Medical Society of Hamburg, and published in the *Deutsche medicinische Wochenschrift*, No. 48, 1887, describes three cases in which, after doing the preliminary steps instituted by Kraske, he introduced certain modifications. In the first case, he attached the divided peritoneum to the serous surface of the sigmoid flexure of the colon, thereby closing the cavity of the belly, and left the anus, sphincters, and lower end of the gut intact, and secured it to the central end with two circular rows of sutures, of which the first included the mucous membrane, and the second the other coats of the bowel. The wound was dressed with iodoform gauze, and opium administered to control the stools. The result was not wholly satisfactory; the ends of the gut did not entirely unite by primary intention, and nearly a year elapsed before the complete closure of the small fistulous track. The sphincters retained their functions, however, and there was no difficulty from involuntary evacuations.

The great value of closing the peritoneal cavity is shown by two cases recorded by Kraske, in which

that feature of the operation was omitted, although complete reunion of the divided ends of the bowel was attempted. In both instances the stitches gave way, during a stool, which occurred a few hours after the operation, despite previous care to empty thoroughly the lower bowel, and the subsequent exhibition of opium, and death ensued from peritonitis from fecal extravasation.

The protracted healing in the case of Schede was due to contact of feces with the sutured bowel. Hence, in the other two operations, to obviate this complication, immediately after resecting the rectum, he made an artificial anus between the belly and descending colon. In the first of these, four-fifths of the rectal wound united by the first intention, and the remainder by granulation, while the outer wound had closed in two months and a half. The artificial opening was then remedied, and at the end of four months from the primary operation the patient was discharged. The second of these cases pursued a very similar course.

The modifications practised by Schede are certainly very great additions to the original procedure. Considered together, the two operations have been performed at least 18 times, with 7 deaths, which is a high rate of mortality, and only a slightly better showing than the ordinary operation for high carcinoma affords. Thus, of 10 cases of Bardenheuer's procedure in the hands of Kümmell, 2 died shortly after the operation, 2 died of sepsis, and the disease recurred in the remainder at intervals which ranged between five and twenty-four months. Bardenheuer's method, it may be stated, consists in removing the anus, sphincter, bowel, and tumor, opening the peritoneal sac, and drawing down the divided gut, and attaching it to the perianal tissues.

It will be observed that the operation of Kraske, or its modifications, has been done solely by German surgeons, so that we infer that excision of high carcinoma of the rectum is not regarded favorably by the profession at large. If this be true, we think that the attitude assumed by surgeons of other parts of the world is most commendable, and that they should not practise the operation until their bolder confrères show that it affords a fair percentage of permanent recoveries. Until this be done, we have no hesitation in saying that the best procedure in this class of cases is left lumbar colotomy as modified by Madelung, of Rostock. The colon having been divided, its central end is united to the lumbar wound, and its lower end is dropped, after closure of its lumen. By thus preventing the contact of fecal matter with the growth, discomfort and pain are effectually checked though the withdrawal of the source of mechanical, chemical, and septic irritation.

IDIOPATHIC DROPSY.

ANY physician in large practice has probably seen cases of dropsy in which it has been impossible to assign a satisfactory cause for the effusion, in the absence of heart, renal, or blood disease. The older writers had a good deal to say about this essential dropsy, but naturally with the increased facilities for diagnosis the number of cases has been reduced to a minimum, and so little regard has been of late paid to it, that even the name does not appear in the ordinary nomenclatures of disease.

In the last number of the *Deutsches Archiv für klin. Medicin*, WAGNER, the well-known Leipsic pathologist and clinician, has an exceedingly suggestive article, giving his experience with this form of dropsy, which in its distribution and general appearances resembles most closely that of renal disease. He gives first a report of six cases in children, in all of whom the dropsy was general, most intense, as a rule, in the legs, and not of great extent in the serous sacs. In all there was pallor, but not anæmia of such a grade as could possibly induce the general œdema. There was no fever, but the cases gave the impression of a serious illness, and three of the six children died. The most careful examination failed to reveal any heart, kidney, or serious blood changes, and in the three fatal cases the anatomical condition threw no light on the cause of the dropsy.

Two cases are mentioned in young bakers, apprentices at the age of fifteen, much exposed to changes in temperature; five cases in adults are referred to, all following cold, and two cases are given in full. With the exception of the last case, none of these presented any of the changes usually associated with anasarca. Case VII. we should certainly not class with the others, as it seems an instance of œdema from anæmia. The patient, a girl aged seventeen, had great pallor, with slight swelling of the upper part of the body and face, and considerable œdema of the legs. The hæmoglobin, estimated with Fleischl's apparatus, was only ten per cent. The œdema disappeared rapidly, and with iron the hæmoglobin rose, in two months, to normal. Surely we have here a not uncommon illustration of the œdema associated with an impoverished blood,

and of which we see marked instances in chlorosis, and in the anæmia of cancer. So striking may the dropsy be in the former disease, that we have known cases treated for months as instances of Bright's disease.

The etiology of this essential dropsy is as yet unknown, a majority of the cases occur after severe exposure and cold, and some of the cases doubtless come in the category of the *anasarque rheumatique* of the French. Many instances have followed the infectious diseases, and it is well to remember that there may be, as Quincke has shown, anasarca after scarlet fever without albuminuria. The three post-mortems in Wagner's cases gave no clew to the pathology of the disorder. A neurotic theory has usually been called in to explain the phenomenon, but we have no satisfactory evidence how œdema can be produced by disturbed vaso-motor action. On Cohnheim's view we must suppose some widespread alteration in the vessel walls, but in what way brought about, whether through nervous influence or by the direct action of such an agent as cold, it it impossible, in the present state of our knowledge, to say. The condition has not only a great theoretical interest, but also a very practical aspect as the cases would appear to be not uncommon, and must be separated carefully from those of renal, cardiac, and hæmic origin. Fortunately, as Wagner shows, the disease in adults is very rarely fatal.

CLEAN HANDS.

AT the present day the medical idea of cleanness is freedom from germs. The difficulty of realizing such a state lies in the carelessness engendered by superficial observation, which leads one to look on infection by the hand as very rare, and in the too minute requirements of those who desire to achieve the impossible. The subject of bacterioscopically clean hands has been carefully considered by KÜMMELL, GÄRTNER, and FÖRSTER, but the latest and most complete, as well as the most practical contribution is by FÜRBRINGER (*Untersuchungen und Vorschriften über Desinfection der Hände des Arztes*, etc., Wiesbaden, 1888). Those who dwell in the Happy Valleys of "Asepticism" will find in his article nothing worth reading; but others, and especially those led by the exigencies of practice, or the struggle for existence, from the autopsy to the puerperal chamber, or from the not eminently aseptic rectum, or vagina to the casual laparotomy, may find it profitable.

Fürbringer was guided in his researches by a knowledge of the fact that the "subungual space," or that included between the free end of the nail and the finger pulp, is the most difficult part of the hand to clean. Even when incapable of infecting the usual artificial culture-media, this space can harbor germs which in the warm fluids of wound surfaces, or the peritoneal cavity may, in the act of operating or touching, be washed out. He therefore endeavored to ascertain how to sterilize perfectly the subungual space. Experiments showed that the disinfectant action of carbolic acid, or sublimate solution did not depend on the strength of the liquid alone, but that the most essential thing of all was a preparation of the skin and the nail. Actual contact of the germicide with the skin does not take place when the latter is dry, and as the result of many experiments Fürbringer added alcohol to the toilet of the hands. His whole method, which is said to give almost ideal results, is as follows: 1. The nails are mechanically cleaned of all visible dirt. 2. The hands, especially the nails, are scrubbed with warm soap and water, by means of the brush. 3. The hands are immersed for one minute in alcohol (at least 80 per cent.), and while still wet, 4. Plunged into 2 per cent. bichloride, or 3 per cent. carbolic acid solution, and kept in it one minute.

The advantages of this method are: Security of disinfection, sparing of the hands, and economy with use of sublimate, which Fürbringer prefers to carbolic acid. The amount and form of the bichloride solution were matters of careful and exact experiments. We may add that this method is now used in von Bergmann's clinic, already famous for its admirable antisepsis.

CHRONIC POISONING BY COFFEE.

MANY of the medical profession for years have been called upon to treat a large class of half-starved women, chiefly poor seamstresses, who are accustomed to carry on the most severe toil with scarcely any other food than crackers and tea. As a consequence of this lack of nourishment, the tea simply aids the woman in using up not only the vital force of daily life but also the reserve powers, which for the maintenance of health must always be present.

Symptoms, therefore, arise in these cases dependent upon two causes: the first of which is exhaustion, the second teaism. It would seem to be doubtful whether the tea itself is ever purely the

cause of the ailments frequently ascribed to it, since it is the very condition of exhaustion which enables the beverage to affect, to any great extent, the general system, save in those cases where enormous amounts are ingested.

We desire now to call attention to an analogous condition produced by coffee, and to which GUELLIOT, of Reims, in the *Revue générale de Clin. et de Thérapeutique* of December 15, 1887, gives the name of coffeeism. Curiously enough, coffeeism would seem to be present rather in the well-to-do and well-fed class than in the class affected by teaism, yet it is evident on comparing the symptoms noted by Guelliot, with those reported some time since by Bullard, that little difference exists between them.

Chief among the disorders produced by coffee we find anorexia, and this symptom also led the list of Bullard. Sleeplessness and nervous tremblings stand next in frequency of occurrence, while a long train of disorders arising from disturbed nutrition and assimilation follow in various forms. In the treatment of this condition, the first object of the physician is, of course, to prevent the ingestion of any more coffee if possible, or at least to limit its use. Further than this the symptoms must be treated as they arise, general hygienic measures must be insisted upon, and, as a general rule, owing to the class of persons suffering from this disorder, exercise is indicated rather than the "rest-cure," as is so frequently necessary in "teaism." Where the sufferer has used coffee with the object of aiding him to carry on some nerve or cerebral strain, this indication is, of course, reversed; but in the fat and heavy gourmand whose emunctories are clogged, whose digestion is disordered, and whose general system is reeking with the results of imperfect elimination of tissue waste, the reduction of the amount of coffee, and plain living with exercise are the chief measures by which to obtain relief.

Notwithstanding the researches of the chemist which prove that caffeine and theine are identical, it must not be forgotten that along with the caffeine in a cup of coffee one takes into the system some of the empyreumatic oil belonging to the bean, the general influence of which is at present unknown, save that it is possessed of sufficient power to influence the system very markedly.

REVIEWS.

DOCTOR AND PATIENT. By S. WEIR MITCHELL, M.D., LL.D. Harv., etc. 12mo. pp. 177. Philadelphia: J. B. Lippincott Company, 1888.

IN a half-dozen essays the author embodies the salient features in the relationship of doctor and patient, among that peculiarly challenging class of invalids, nervous women; with whom he has had so much to do.

His avowal that he was tempted to call these essays lay sermons reminds us of the remark made by a gifted and suffering woman, "The physician is the priest of the 19th century, and is far more the father confessor of women than the clergyman." Retaining the metaphor our author first lays aside the formal robes of his office, and in simple garb discusses the physicians of two centuries ago, and finds in their wisdom the same saving leaven of physiological good sense which leavens the best knowledge of to-day. He tells us not only what the good physician was, but what, in the light of modern accuracy, he should be, and urges the high ideal of the most thorough discharge of duty, the exercise of the most discriminating sympathy, and liberality of culture upon us.

Then, "from grave to gay," he recalls the pleasures of convalescence, and so brightens anew the brightest link in the bond of physician and patient. But, recollecting his office, he becomes again the priest of suffering, and turns upon the manysided problem of pain, the clear light of extensive and careful observation. He does not forget children, and would treat, not only material but mental disease in them by securing above all the moral coöperation of parents and caretakers.

Certainly none can speak more knowingly than he of nervousness and its influence on character, and *ex cathedra* the duty of self-control and patience in suffering is strongly urged. It is interesting to know the author's view, that, regarding the differences between men and women, for him, "the grave significance of sexual difference controls the whole question;" a significant commentary upon some methods of educating women in vogue at present. And last, to complete a cure, the services of that old and tried nurse of the human race, Dame Nature, are invoked, and life for women, in tents and cabins, is sketched so happily that they can hardly resist the invitation.

There is no one more commonly discussed than the doctor, and few, indeed, are they who are not at some time patients; and for the profit and pleasure of both these essays will prove most suggestive.

THE RECTUM AND ANUS. By CHARLES B. BALL, M. Ch. Univ. Dublin, F.R.C.S.I., Surgeon to Sir Patrick Dun's Hospital, etc. 16mo. pp. viii. 410. Philadelphia: Lea Brothers & Co.

A CAPITAL book in a capital series of clinical manuals. Thoroughly practical, it is both comprehensive and condensed, and the possessor of it will find but little use for any more extended work upon the subject of which it treats. Based upon a large personal experience as the book evidently is, its author has been as well a diligent student of the writings of other observers, and he presents with fairness and sufficient fulness the views of those who have the right to be regarded as authorities.

Nor is there the least sign of national prejudice or insular narrowness, but in the spirit befitting the subject of an empire encircling the globe Mr. Ball quotes freely from American, German, and French authors. The result is that the reader feels that he has in his hand a book that he can trust to contain all and the most recent information that is worth having. Indeed, upon a careful examination we find no omissions of any consequence, and are impressed by the combination of minute detail, and terse condensation which marks the book. Such a combination is attainable only by one who is thoroughly master of his subject, and it inspires the reader with full confidence in the fitness of the author to direct and guide. This confidence is not misplaced, as Mr. Ball is not only a full man, but a most sound surgeon.

Calm and judicial in the estimates he places upon differing modes of treatment, Mr. Ball gives his own views with candor and clearness, and these views will be found to commend themselves very generally to practical surgeons of experience. In fine, we have utterly failed to convey our meaning if the reader does not perceive that we hold this book in high estimation, and we would freely commend it as a very good book on a most important topic. Adding that the illustrations are good, sufficiently numerous, and really illustrate the text, we end by saying, buy it, read it, and differ from it most cautiously.

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, January 19, 1888.

THE PRESIDENT, A. JACOBI, M.D., IN THE CHAIR.

DR. T. R. POOLEY read a paper on

THE INDUCTION OF PREMATURE LABOR IN AMAUROSIS AND AMBLYOPIA FROM ALBUMINURIA IN PREGNANCY.

He said that disorders of vision associated with pregnancy have not received the attention which, from their importance, they deserve. Such disorders are more apt to occur in the later months of utero-gestation, and the sight is sometimes permanently lost. Vision may be affected in two ways. *First*, a sudden amaurosis, and, *second*, a gradual impairment, but not complete loss of sight. Like kidney disease, these disorders of vision in pregnancy have been long known, but not until recently has it been preferred to induce premature delivery for sight alone. As to the propriety of this procedure and the indications for its adoption, these can best be settled on scientific grounds by the coöperation of both obstetricians and ophthalmologists.

The honor of first proposing the induction of premature labor in these cases belonged to Dr. Edward G. Loring, of New York, who, in 1883, published the history of a case in which labor was prematurely induced for atrophy of the optic nerve depending apparently on rapidly recurring pregnancies. The patient was thirty-five years of age at the time, and one eye was already blind. Fearing the loss of the other eye, he proposed the operation. In this case the usual symptoms of albuminuria were entirely absent; but Dr. Pooley thought it possible that the disease of the eye was really dependent on uræmia, as there was no reason why optic neuritis should not occur from obscure disease of the kidney.

Having referred to cases reported by Lee and Eastlake, of England; Holmes, of Chicago; and O. W. Moore, Arango, and Callan, of New York, and himself, he went on to say that if the patient was allowed to go to full term, permanent blindness, or serious impairment of vision might occur; while, if premature labor were induced, or took place spontaneously, improvement always followed, and in some instances the sight was entirely restored. In many cases of the neuro-retinitis of Bright's disease, it seemed as though nature attempted to relieve the patient by bringing on premature labor; but where this did not take place spontaneously, the artificial induction of labor was justifiable, and even demanded.

Having quoted Dr. Loring on the medico-legal aspects of the operation, Dr. Pooley gave his conclusions as follows:

First. In all cases of pregnancy, not only should examinations of the urine be systematically made, but the eyes should be examined with the ophthalmoscope; since, in a large proportion of cases, where eye troubles exist, the patients make no complaint of disorders of vision. Frequently such troubles can be detected with the ophthalmoscope long before any disease of the kidney is shown in the urine.

Second. In uræmic amaurosis, without changes in the eye visible to the ophthalmoscope, even should the usual accompanying symptoms, such as dizziness, nausea, and threatened convulsions, be absent, their supervention is soon to be anticipated, and the immediate induction of premature labor is indicated, without waiting until the life, as well as the sight of the patient is in danger.

Third. In neuro-retinitis the induction of premature labor is not only justifiable, but urgently demanded. In some instances it is called for even in the earlier months of pregnancy.

Fourth. It is required in cases of eye trouble recurring in successive pregnancies, like Loring's.

Fifth. A woman having once suffered in this way during pregnancy, the relationship of cause and effect should be fully explained, both to herself and her husband.

DR. EDWARD G. LORING spoke of the necessity of early ophthalmoscopic examinations in all cases of pregnancy, and said that it is a very simple thing, which every practitioner could readily become familiar with, to detect the retinitis of Bright's disease. Statistics show the very great frequency with which the retina is affected in pregnancy, and it is important that the trouble should be promptly recognized. This inflammation may begin very early in pregnancy, while disease of the nerve may not occur until many months after the labor. He then spoke of a very peculiar condition not associated with *retinitis albuminuria*, which originates not from pregnancy, but from uterine disturbances. Thus, a girl of eighteen was found to be losing the sight of one eye, and an examination revealed atrophy of the optic nerve on that side. As she was suffering from amenorrhœa, every effort was made to restore the menses, and the measures adopted proved successful. One year later the other eye became affected, and on examination now showed nearly complete atrophy of the optic nerve on one side, with retino-neuritis on the other. The menses, which had again ceased, were once more restored, and afterward

she was married, and had a child. After she had been nursing the infant for about three months, she began to have trouble again in the sound eye. She was advised to wean the child at once, and when she had done so the menses came on. She is now pregnant again.

DR. BARUCH said that he was in accord with Drs. Pooley and Loring in regard to the propriety of inducing premature labor in the class of cases referred to. Life is as much in danger as the sight, and, therefore, he thought the necessity for it is plain. The disorder of vision is a danger-signal which warns the practitioner not to neglect even small symptoms. If amaurosis or amblyopia is present, the condition depends on nephritis, and there are, therefore, many reasons why the pregnancy should be prematurely terminated.

DR. MURRAY thought that all the deductions of the paper were hardly justified by the facts of the case, so far as known, since a very small proportion even of those who suffer from eclampsia become blind. It seemed to him unnecessary to subject all pregnant women, whether they complained of any disorder of vision or not, to the inconvenience of an ophthalmoscopic examination.

DR. GEORGE T. HARRISON said that the paper seemed to show the close relations that exist between different specialties in medicine, and that he had been convinced by it that obstetricians should pay more attention to the vision in pregnant women. In practice it is important to make a distinction between *nephritis gravidarum* and *nephritis in gravitate;* the first being a form of disease in which the anatomical and functional disturbances of the kidneys are evolved by the state of pregnancy, while the latter is an interstitial or parenchymatous nephritis, which either existed prior to conception or has been produced by causes other than pregnancy during the course of the gestation, and in which abortion or premature labor is apt to occur spontaneously. It was evident from what we had heard this evening that the ophthalmologist is able to throw considerable light on this subject.

DR. POOLEY in closing the discussion said he had already written a paper on the subject of eye-disease dependent on uterine disturbances, alluded to by Dr. Loring, in which he had reported some cases observed by himself, and that he had, therefore, not referred to that subject in his present paper.

SECTION ON PEDIATRICS.

First Scientific Meeting, January 25, 1888.

J. LEWIS SMITH, M.D., CHAIRMAN.

DR. A. CAILLÉ presented a

CASE OF GENERAL MUSCULAR CONTRACTURE

in an infant six weeks old which had been seen by him for the first time that afternoon, and said that it seemed to him that the condition present was probably due to an arrest of development *in utero*. The parents were both healthy, and this was their third child; the other two children being strong and well-developed in every way. As far as could be ascertained there was no syphilitic or other taint in the infant, which was born at full term. The head was large with a decided flattening on one side of the cranium, but the rest of the body was small and shrunken in appearance. The jaw, which was turned somewhat to one side, could be opened to only a very limited extent, and there was contracture of the muscles of both the upper and the lower extremities.

DR. A. JACOBI, after an examination of the infant, which was exhibited to the Section, said that he could not see any evidence of arrest of development, and that the condition present appeared to him to be the result of a meningo-encephalitis occurring during fœtal life. The contracture of the jaw somewhat resembled that seen in incipient trismus, although the spasm was not so marked as in that condition. The appearance of the cranium was very much like that seen in cranio-tabes in children a year or more old. He thought that it was doubtful whether galvano-electric treatment would be of much service in such a case, and that an unfavorable prognosis must be pronounced, although a certain proportion of children presenting the condition noted in this infant, which was undoubtedly very rare, recovered.

THE CHAIRMAN exhibited a

CASE OF INFANTILE PARALYSIS

which he believed to be due to polio-encephalitis. The child was two years old, and had always been perfectly healthy, with the exception of an attack of diarrhœa, up to May last, when, at the age of sixteen months, while apparently perfectly well, it was seized with violent convulsions, which lasted from 6 P. M. to 9 A. M., and were accompanied with considerable febrile movement. After the stupor commonly following severe eclampsia had passed away it was found that the child had complete paralysis of the muscles on the left side, including the facial muscles on the same side. The recovery from the facial paralysis was complete and had taken place rapidly, while there had been a gradual improvement as regards the muscles of the upper and lower extremities. At the present time the child is able to walk, though partly dragging the left leg, while there is still a spastic condition of the toes of the left foot.

DR. SMITH said he was of the opinion that some of the cases resembling this, which had been reported as due to cerebral inflammation, were in reality instances of cerebro-spinal meningitis. Since 1871 epidemic cerebro-spinal meningitis had obtained a permanent foot-hold in New York and children were constantly liable, therefore, to be attacked with this disease. In the present case, however, the patient resided on Long Island, and, consequently, not being subject to influences giving rise to cerebro-spinal meningitis, he thought the latter might be excluded here. It was thus evident that the condition must have had a local cause, and, judging from the history of the case and the symptoms described, particularly the fever accompanying the sudden attack of eclampsia, he was inclined to the opinion that it was one of infantile cerebral paralysis or polio-encephalitis, as described by Strümpell. One of the characteristics of this affection pointed out by the author named was that tendon reflex not only remained, but was exaggerated, and this was found to be exaggerated in the present instance.

DR. B. SACHS said that it seemed to him that simple meningeal hemorrhage would offer a more satisfactory explanation of the phenomena noted in this case than polio-encephalitis. As a result of the latter condition there almost always followed more or less mental impairment, while after meningeal hemorrhage the condi-

tion of the mind remained unaffected, as was the case in this instance. Still, it was by no means certain what the exact diagnosis was here, and he thought that it would be impossible to arrive at any definite conclusion until a study of the electrical reactions of the case had been made.

THE CHAIRMAN stated that it was the marked febrile movement described as accompanying the eclampsia, which had principally led him to decide in favor of polio-encephalitis.

DR. FRANCIS P. KINNICUTT said that he believed that many cases like this were due to embolism. Abercrombie, in reporting a number of cases of infantile paralysis, recently, in one of the English medical journals, had expressed the opinion that a certain proportion of them depended on embolism; and Goodhart, while acknowledging other sources of origin in many instances, also ascribed some of the cases to this cause. It seemed to him, therefore, that the possibility of embolism should always be taken into consideration, and particularly when children are in an asthenic condition, as after attacks of the exanthemata.

DR. JACOBI said that in asthenia from the eruptive fevers we should expect thrombosis rather than embolism. If there were heart disease, or even a broncho-pneumonia, we might believe then an embolus was the cause of the paralysis, but otherwise he thought this was to be excluded. Thrombosis, however, is a very common result after exhaustive diseases. As to the advantage of studying the electric reactions of the present case, he hardly thought that much light would be thrown on it by such an investigation.

DR. KINNICUTT said that he should have explained that in embolism occurring in the asthenic conditions referred to, he should attribute the embolism to thrombosis occurring in some distant part.

THE CHAIRMAN said that in this case thrombosis and embolism could be excluded on account of the previous good health of the child.

DR. LANDON CARTER GRAY, of Brooklyn, said that the exact diagnosis of hemiplegia in children is environed by much obscurity. Personally he was very doubtful whether the condition described by Strümpell occurred very often, and he believed that the statements which he made were founded, to a large extent, merely on speculation. The most that we could say was, that in children the site of the trouble is apt to be in the cortex of the brain, and usually in the motor region. It is generally impossible to make a differential diagnosis, and at autopsies he had more than once congratulated himself that he had not attempted to decide between encephalitis and meningitis during life. The whole matter is entirely uncertain, and in the present state of our knowledge, on account of the great liability to make mistakes, he thought it more scientific not to venture upon a precise diagnosis in such cases. From a practical point of view it makes very little difference what is the exact condition present.

DR. A. SEIBERT then read a paper entitled

A CONTRIBUTION TO THE STUDY OF CEREBRAL PARALYSIS IN INFANCY.

After a brief introduction, he said that in 1885 he was called upon to examine an infant two and a half months old. It was the seventh child of its mother, all the others having been healthy children, and there was no evidence of syphilitic or tubercular trouble. The mother stated that during her pregnancy, when she was carrying this child, she scarcely ever felt life, and that when the infant was born it was asphyxiated, and had the cord tightly wrapped twice around its neck. It was very different from her other children at the time of birth, being small and flabby, and for two months it never stirred or cried. When two and a half months old it had an attack of capillary bronchitis, and it was at this time that it first came under Dr. Seibert's notice.

At the age of ten months it was still in practically the same feeble condition. It lay quietly on its back, the skin was wrinkled, and the respiration was noted to be for the most part diaphragmatic. There was no evidence of cranio-tabes. The pupils were narrow and equally dilated, and the constant expression on the child's face was that of a dreamy, vacant stare. When the body was raised to an upright position the head would fall to that side on which there was the greatest incline. The intercostal spaces were very narrow, the intercostal muscles took but little part in the act of breathing, and there was a deep furrow in the region of the diaphragm. The muscles of the neck were but mere strings, and there was in general an almost complete absence of muscular power. The infant never had any convulsions.

From the phenomena thus presented it was evident that there was an atrophied condition of the brain, and Dr. Seibert endeavored to find out the cause of this. Meningitis was at once dismissed, as this condition had existed from birth; for if it had been due to meningitis this must have occurred during fœtal life, and, so far as he was aware, this was something which had never been noted. Neither did he think that the trouble was due to hemorrhage. The child was small, flabby, and atrophic when born. All the symptoms denoted an atrophic condition of the whole body, including the brain, at the time of birth and after birth. The muscles of the neck were more completely atrophied than any others, and in this connection it was significant that the infant had been born with the cord wound twice around the neck.

In this constriction of the neck by the cord, it seemed to him, was to be found the solution of the case. By means of this the blood supply of the head and brain had been to a great extent cut off, and this would abundantly account for the cerebral atrophy and the general lack of nutrition in the child's body. At the time of birth the bloodvessels of the head, which had long been comparatively empty from the pressure of the cord around the neck, suddenly became filled when this was removed, and hence the aphyxia noted.

At fourteen months of age the child died from another attack of capillary bronchitis, and when the brain was examined after death it was found that the layer of white matter was very thin, and the diagnosis of cerebral atrophy was fully confirmed. In the course of his experience he had met with four cases altogether in which there was a congenital atrophic condition of the brain, but only in this instance had he been able to secure a full clinical history and verify the diagnosis by autopsy.

The second form, he said, is more common than the first, and of this he gave a detailed description of two cases. In one of these a post-mortem examination was made, but not in the other. In this second class of cases the symptoms are similar in character to those met

with in the first; but here they are brought about by pathological changes; viz., meningitis with exudation, arachnoid thickening, and sometimes moderate hydrocephalus. The results of the meningitis cause atrophy of the brain. The symptoms of defective innervation always remains the same whether the cerebral atrophy is congenital or is the result of subsequent meningitis.

The third class of cases mentioned is characterized by incessant crying and moaning, with muscular contractures and sometimes permanent opisthotonos, though there are no general convulsions. The condition is due to chronic meningitis, steadily increasing, and causing abundant exudation over the cortex, but running its course without febrile movement. He related two cases of this kind, occurring in a brother and sister, and in one of them the diagnosis was confirmed by autopsy. After lasting for several months the affection terminated in heart failure, the temperature in one case falling at the time of death to 96° F., and in the other to 94°. In the case in which the post-mortem was held there were no tubercles or tubercle bacilli present.

In conclusion, Dr. Seibert said that in these three classes of cerebral paralysis of infancy the clinical manifestations were all due to atrophy of the brain, although in the first the original cause of trouble was insufficient blood supply, in the second, acute meningitis, and in the third, chronic meningitis.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, January 11, 1888.

THE PRESIDENT, J. SOLIS-COHEN, M.D., IN THE CHAIR.

DR. CHARLES K. MILLS read a paper on

THE TREATMENT OF NERVOUS AND MENTAL DISEASE BY SYSTEMATIZED ACTIVE EXERCISES.

Exercises or movements for medical purposes—medical gymnastics, in other words—have been divided and subdivided to an absurd degree by Ling and his followers. Schreiber gives an example of a German term for what is called the quarternary combination of the standing position, which term contains forty-five letters and nine different words, although it is written in German as a single word. The division, however, into such movements or exercises as passive, duplicated active, and active, is rational and useful.

It was of systematized active exercises, that Dr. Mills more particularly wished to speak. The expression single active movement indicates that the movement is performed by a single individual without direct assistance, although it may be done under the orders of a physician or master. Exercise of this kind may be performed either with or without apparatus, and even when the latter is used it need not necessarily be expensive.

Dr. Mills next briefly reviewed the literature of medical gymnastics, and described various forms of pulley-weights and other apparatus. He made use largely of the forms of respiratory exercises described by Blaikie on *Sound Bodies for Our Boys and Girls*, sometimes without and sometimes with apparatus.

The treatment should begin with the simplest forms of exercise, and these should be constantly increased and elaborated, as the patients gain in skill and strength. It is wonderful how little some patients can do in this direction. A grasshopper in gymnastics is a burden to them. Five minutes or even less, is sometimes all the time that can be safely taken at first, and five minutes of actual exercise must sometimes be distributed over half an hour. In most cases the time should never be allowed to exceed twenty to thirty minutes. Often it is important to give resting spells during the process of treatment. Some patients, ambitious to excel or fearing to appear weak, will certainly overdo. Individual peculiarities should be carefully studied. In the majority of cases of nervous and mental diseases in which systematized active exercises are indicated, the danger will be greater of overdoing than of doing too little.

The paper was not founded simply upon theoretical considerations and a study of literature. For several years Dr. Mills had, to some extent, used systematized active exercises, either with or without apparatus, and during a year past he had had a considerable number of patients on this treatment. His objects, in addition to recording experience, were to call general attention to a too much neglected method of treatment, and to make certain practical suggestions which naturally grew out of a study of the subject. When preparing this paper he was able to put his hands on forty-four such cases, not including those under treatment at the Philadelphia Hospital. Of these cases, twenty-five were treated by the general active exercises, some with and some without pulley-weight apparatus; the other nineteen by some local method for a special purpose. The patients treated by the general exercises included cases of idiocy, insanity, asthma, minor chorea, habit chorea, hysteria, general nervousness, neurasthenia, nervous palpitations, lithæmia, cerebral syphilis, diabetes, curvatures, ataxias, and paralyses; those treated by special more or less local methods included cases of hemiplegia or monoplegia, infantile paralysis, lead paralysis, rheumatic neuritis, muscular atrophy, aphonia, and writer's or telegrapher's disease.

Much could be said, did time permit, about the beneficial effects of regulated physical culture in idiocy. For the improvement of the general nutrition of a class of unfortunates, usually deficient in this respect, as well as for their training and development, both mental and physical systematic exercises are of the utmost value. In some grades of idiocy attention should be paid to individualizing the treatment by exercise. To a certain extent gymnastics can be used for diagnostic and prognostic purposes in idiocy, observation of those attempting systematized exercises determining the possibilities as to general improvement.

A few weeks since, in the Insane Department of the Philadelphia Hospital, Dr. Mills had started a class in systematized active exercises, selecting eight women suffering from melancholia, and putting in with them to give zest to the treatment two other cases not mentally depressed. Sufficient time had not yet elapsed to determine how much in a curative way could be accomplished by such treatment, but already the experiment had proved an instructive one. He found that even these patients, plunged into the profoundest depression, could, by sufficient persistence, be aroused to the performance of some movements; others did moderately well; some very well. The difficulty of fixing the attention of these patients, and yet the possibility of doing it by sufficient effort, had been clearly shown. The class had made much im-

provement in facility and rapidity. Small classes should be formed in large insane asylums, and the treatment given a thorough trial.

Systematized active exercises serve a good purpose in some of the various disorders designated as asthma. One case of this kind, a young lady, despondent, weak, dyspeptic, hysterical, with feeble heart, and subject to attacks of asthmatic breathing, improved with great strides in a few weeks under general active exercises. She began treatment with half-pound dumb-bells, and at first could only stand five minutes' work. The exercises were increased, until half an hour was reached, and dumb-bells weighing four pounds were used.

In the treatment of chorea, or rather choreas, systematized active exercises are valuable. Special forms of gymnastics have been employed for this affection particularly in France and Germany, to a large extent, by Napoleon Laisné, a French professor of gymnastics, and evidently an earnest and enthusiastic worker in his chosen field.

Two cases of minor chorea improved under medicinal treatment up to a certain point, and then would advance no further. General exercises with light dumb-bells were ordered, and in both cases the progress to complete recovery was rapid. In the treatment of habit chorea, he found the exercises have a peculiar value.

The advantage of any treatment which involves specific direction and the adroit calling out of the volition of a patient must be evident to everyone who has had experience with hysteria in its manifold forms. In hysterical paralysis much can be done by laying out a careful plan of treatment by exercises, and gradually leading up to their full performance. For the improvement of nutrition, and of what may be termed the general nervous and mental tone of hysterical patients, systematized active exercises fill an important place. Properly used and controlled, they may also prove most beneficial for cases of general nervousness, and also for neurasthenia. Whatever view may be taken of the much mooted question of neurasthenia, without doubt both respiratory and muscular power, either primary or secondary, is often deficient, and the nerve centres themselves can be strengthened and improved by exercising these two powers. Care should be taken not to force individuals suffering in this way to excessive effort at first.

For the group of diseases which fall to the lot of both the neurologist and orthopædist—cases of curvature, deformity, atrophy, etc.—systematized active exercises have long been used by the best authorities. The more particular object was to call attention to the value of systematized respiratory exercises in setting up or straightening the feeble and stooped, who also frequently are sufferers, in some degree from nervous or mental weakness. If, at the same time, appropriate general hygiene is used, the improvement in such cases is sometimes simply wonderful.

For gout and lithæmia, to promote excretion and nutrition; for anæmia and spanæmia, to assist assimilation and further oxidation; for headache, sleeplessness, and nervous irritability, to soothe and calm the nervous system; to aid elimination in cases of lead, arsenic, mercurial, and other metallic or toxic diseases; for diabetes, to favor the skin and increase combustion, systematized active exercises have a value which cannot be too highly extolled, and one which Dr. Mills had had an opportunity to demonstrate in his own practice.

In curable ataxias, as in those which follow diphtheritic or exanthematous diseases, and in the hysterical varieties, systematized active movements, the patient at first lying down or sitting, and subsequently standing, had proved of great service.

In patients suffering from multiple neuritis, or some curable forms of myelitis, advantage should be taken of the first signs of motor improvement to begin with active exercises, while the use of electricity and massage is continued. The particular point upon which it was desired to insist, was that the attempt to join the will of the patient to the long unused muscles, should not be deferred a moment longer than was necessary. Simple attention to this truth, which ought to be self-evident, would in many cases have saved patients from weeks or months of uselessness.

In the treatment of various forms of paralysis, that systematized active movements may be employed with advantage has long been known. Even in paralysis from organic brain disease, a clear method of using gymnastic treatment will be found to serve an excellent purpose.

For some of the arthritic neuroses, and for rheumatic neuritis, or muscular rheumatism, these exercises are of undoubted value. Dr. Mills saw three cases of a form of rheumatic neuritis affecting the deltoid and adjoining muscles, in which the progress to complete recovery was much assisted by an early resort to dumb-bell exercises and pulley-weights.

Hysterical aphonia or apsythria (loss of the power of whispering) can sometimes be treated successfully by a species of respiratory gymnastics, or a combination of respiratory with vocal and muscular gymnastics.

In certain cases the treatment by rest, seclusion, etc., could be successfully combined with that by systematized exercises. After the nervous or broken-down patients suitable for the treatment have progressed to a certain point; after their nutrition has been placed upon a firm basis, respiratory exercises without apparatus, or with very light dumb-bells, could be carefully begun. Five minutes, or perhaps only three minutes, should be taken at first, and the time should be increased with the utmost caution. In a recent neurasthenic case with hystero-epileptic seizures, after the patient had improved under the rest treatment, systematized active exercises were resorted to with the greatest benefit. In those cases of hystero-epilepsy in which the seizures are partially voluntary, or of the induced voluntary kind, the use of such exercises assists the patient in obtaining that control of herself and her movements which enables her to resist the beginning of the attacks.

CORRESPONDENCE.

INTRACAPSULAR REMOVAL OF THE SPLEEN.

To the Editor of THE MEDICAL NEWS,

SIR: In THE MEDICAL NEWS of January 21, 1888, in an editorial entitled "Inaccuracies in the History of Splenectomy," attention is called among other things to an operation in 1711 by Ferreri which consisted in opening an abscess of the spleen. The paragraph ends with the statement that a similar case occurred quite recently in this country. A case occurring recently in this city, in which I was the operator, is probably the one referred

to. I shall report this case in full at a later date under the title of "Intracapsular Removal of the Spleen." Briefly the points in the case are as follows: The patient was a married woman, aged twenty-nine years, presenting a large spleen extending to within an inch of the crest of the ilium and beyond the median line. The cause was an hydatid cyst. For two weeks prior to operative interference she had a temperature of 105°. On October 4th, 6th, and 9th I aspirated the cyst. I then determined to open the spleen, and on October 14th performed splenotomy through an inch and a half abdominal incision. October 28th I made a counter-opening at the free end of the lower rib.

At various intervals I removed with finger and dressing forceps accessible portions of spleen; at one time removing in bulk as much as a normal spleen. December 2d, a week after I had ceased to be able to remove any more by the finger or forceps, a characteristic sloughing process began which ultimately removed the last of the spleen—a small portion which I had located in the most posterior part of the cavity close to the diaphragm.

Very severe hemorrhage, most profound anæmia, and an almost fatal attack of pneumonia complicated the case. January 12, 1888, the primary wound was allowed to close, the counter-opening will be closed in a few days. The patient is sitting up, eating better than for five years, and sleeping better than for two years.

I take this means of calling attention to the case to correct an impression caused by an inaccurate newspaper report. I did not open an abscess of the spleen, nor did I perform a technical splenectomy. The operation was done to let out the contents of an hydatid cyst, the sac of which was highly inflamed. On opening the spleen it was found that the sac had ruptured, and the contents had rendered the spleen so septic as to indicate its early removal. While awaiting consent to a technical splenectomy I determined to remove portions of the organ gradually until urgent symptoms might compel me to desist. One danger always beset me, that from hemorrhage, but I always succeeded in checking it before it became dangerous. The condition of the capsule, thickened from capsulitis, was an element of safety in the case; although for the same reason retraction of the capsule and consequent contraction of the cavity was delayed. The subsequent history of the capsule I will refer to at a future time. I have, in the pathological laboratory of the Jefferson Medical College, some considerable sized pieces of the spleen with the remains of the cyst wall to show when occasion requires.

In concluding this letter I would ask if this is not the first case on record in which a spleen has been gradually but deliberately removed from within its capsule.

Respectfully yours,

ANDREW J. DOWNES, M.D.

PHILADELPHIA, January 24, 1888.

THE DIURETIC INFLUENCE OF STROPHANTHUS.

To the Editor of THE MEDICAL NEWS,

SIR: Your editorial note under the above heading in a late issue of THE MEDICAL NEWS is rather misleading, because it overlooks the work of Prof. Fraser, the real discoverer, as well as the clinical observations of others who have given the matter very careful attention; and with your permission, I should like to correct the erroneous impression which obtains regarding a most important remedy.

You say, "So much has appeared in the journals during the last few months concerning strophanthus and its effects on the heart, that its action on the rest of the system has been overlooked." In reply to this let me refer you to the paper of Prof. Fraser, published in the *British Medical Journal* of November 14, 1885, where he reports five cases treated by strophanthus, in two of which the diuretic action of the remedy is noted as follows: (1) The amount of urine was found to be 13 ounces and 27 ounces respectively, on the two days preceding the administration of strophanthus. The remedy was begun on January 24, and on that day the amount of urine voided was 22 ounces; on the 25th it had increased to 42 ounces, on the 26th, to 96, on the 27th, to 152, and for the succeeding twelve days it ranged in amount from 63 to 109 ounces daily. (2) In the next case the average quantity of urine voided in the two days preceding the use of strophanthus was 27 ounces, but on the day following it was increased to 55 ounces, on the second day to 58, on the third day to 70, on the fourth day to 74, and on the fifth day to 82.

In a communication to this journal, published November 5, 1887, page 553, I have referred to strophanthus as a remedy "which would act principally upon the heart, and lightly upon the bloodvessels, which, like digitalis, would produce diuresis and reduce temperature. . . . As compared with digitalis, its action upon the heart is more than twenty-five hundred times greater; while on the bloodvessels its action is less than one-tenth that of digitalis." In the report of a series of cases treated by strophanthus (*Med. and Surg. Rep.*, September 10, 1887), I have spoken of the diuretic action of strophanthus, putting forward a theory to account for this specific effect on the renal function.

You say also that it has been found that strophanthus "increases the urinary flow, both by mechanical pressure, due to greater arterial tension, and also by a direct stimulation of the secreting structure of the kidney." The first part of this proposition is scarcely warranted by the facts, as I shall presently show; the second portion is granted, and judging by the work done by Heidenhain and his pupils in the way of physiological investigations respecting the renal function, I have named this "direct stimulation" *cellular activity*. My objections to the theory of "mechanical pressure," and "arterial tension," are based on clinical observation and confirmed by the experiments of Dr. Phillips with Roy's onkometer, an account of which is given in his paper read before the Ninth International Medical Congress. He says, "When the action of strophanthin on the kidney is investigated, it is found that the drug only causes a slight and temporary contraction of the organ, which soon returns to nearly, though not quite its previous volume. Thus, whereas digitalin will produce a contraction of the kidney lasting half an hour, strophanthin, on the other hand, produces a much slighter contraction, lasting only twenty or thirty seconds. Further, it does not produce any marked increase in the rate of the urinary flow, although, *à priori*, it might have been expected to do so." Dr. Phillips's experiments, although made under favorable conditions, were made upon healthy kidneys, and cannot be accepted as trustworthy guides when we have to deal with diseased conditions, an important factor

which is often overlooked. By reason of our inability to subject our patient's kidneys to the test of Roy's onkometer, we are compelled to conduct our treatment in accordance with the clinical indications, and these indications clearly point to strophanthus as a valuable and safe diuretic in properly selected cases, experimental physiology to the contrary notwithstanding.

You intimate that "cumulative effects may be found to follow its administration, when the remedy shall have come into more general use, and it is suggested that "So little is known as to the renal effects of the drug, that it is possible that it may be too irritating to use constantly in cases of kidney lesions," all of which seems to me an attempt to discourage its use, and an indirect bid for the continuance of the deadly digitalis, which has already slain its thousands and tens of thousands. When given in proper doses the effect of strophanthus is readily appreciated in the cardiac action and in the radial pulse, and within a few hours there follows a notable increase in the activity of the kidneys, conditions which point to its rapid elimination from the system. Why, then, are we required to administer strophanthus as we have been taught in regard to digitalis, with fear and trembling?

While it may be true that little is known amongst the majority of the profession as to the renal effects of this drug, this charge of ignorance on the part of those who have observed it clinically will not hold; and I venture the prediction, that its value as a therapeutic agent will be greatly extended, when it becomes more generally known. Allow me, in concluding this rather lengthy communication, to quote from a letter lately received from a well known and highly respected physician of more than forty years' standing. He says: "The peculiar properties of strophanthus are very interesting to me. . . . I have long believed, and have long taught, that the reckless use of digitalis, in all cases of heart weakness, was doing much mischief. I am glad that scientific investigators are coming to the same conclusion. My conclusions were those of an active practitioner, not an experimental physiologist."

JOHN AULDE, M.D.

4719 FRANKFORD AVE., PHILADELPHIA.
January 18, 1888.

[In reply to the above, we have only to say that we were well aware of the results of Dr. Fraser, and did not quote them because the editorial referred to was intended to call attention to the more recent studies on the drug. Dr. Fraser's experiments on man concerning the renal action of strophanthus are very limited as compared with those of Drasche and Mairet and Combemale. The results of Drasche are so closely in accord with the results of Phillips as to the influence of the drug on the normal kidney, as to be of great interest.

Moreover, the results of Phillips do not clash with the belief expressed as to the effect of increased blood pressure, for Phillips found that those drugs which increased secretion by renal stimulation produced first a momentary contraction with decreased renal flow, followed by expansion with increased flow. The very fact that the kidney contracts proves the mechanical pressure theory rather than the contrary, for every one knows that when actively at work all glands become swollen and comparatively turgid.

If Dr. Aulde has read the editorial with no more care than he has exercised in quoting us, we cannot wonder at his note. We did not state that "cumulative effects may be found to follow its administration," but that the statement of Mairet and Combemale, in denying such a possibility, could not be considered proven, "until the drug has been more widely used." Considering that strophanthus has been used and is used at present as a most lethal arrow poison, it is rather stretching a point to compare it favorably with the "deadly digitalis," of which the dose is generally three or four times the dose of strophanthus, even if the supposed attempt had been made to give the older drug any assistance.

No charge of ignorance was made, but if the writer can find the records of even one thousand of the "slain," toxicologists will certainly be indebted to him.

We note that while Dr. Aulde believes in the results reached by the experimental physiologists in the first part of his note, he rather curiously tries to decry them in the latter part.—ED.]

NEWS ITEMS.

Dr. Henry C. Coe has been appointed an obstetric surgeon to the New York Maternity Hospital, succeeding Dr. E. L. Partridge, resigned.

The Tariff on Surgical Instruments.—The Georgia Medical Society has started a "movement to remove the import duties from all medical and surgical instruments and appliances, including those used in the diagnosis as well as treatment of disease, so that they may be furnished to those needing them at the lowest possible prices," and they present the following facts to show the extent of the grievance and the justice of their plea:

1st. Physicians are at the mercy of instrument makers in regard to price, make, and quality of finish, because of the lack of sufficient competition.

2d. The price of instruments made in this country is out of proportion to that paid for similar instruments on the Continent of Europe.

3d. Surgical instruments and appliances are so costly that few entering the profession can provide themselves with an outfit adequate to carry on a general practice. At present prices it is impossible for a country physician's income to sustain his investing in costly instruments, and as a result many simple cases, such as retention of urine, foreign bodies in nose or throat, deep-seated abscesses, etc., all of which could be relieved at once with the proper instruments, must either die from the immediate cause or from the effects of time lost in seeking skilful manipulation, or else they are frequently crippled and disfigured, because the most intelligent help though patiently given is itself crippled for want of proper instruments.

4th. The cheaper grades of instruments are either antiquated or so poorly made that they may prove a cause of failure in operation, sapping, as it were, the natural inclinations to surgery in its inception.

5th. European instruments are from twenty-five to seventy-five per cent. cheaper than ours, and their introduction into the market will enable the mass of doctors to buy those of prime necessity, will bring down the price of home-made appliances, and oblige the makers to use good material, and put a better finish to their work.

6th. The removal of import duties on surgical and other instruments used by the profession, and on medi-

cines in general, will produce the same results as we all know it did on quinine.

Philadelphia Hospital.—Dr. James Hendrie Lloyd has been elected Neurologist to the Philadelphia Hospital in place of Dr. Roberts Bartholow resigned.

Death of Dr. George A. Crosby.—Dr. George A. Crosby, one of the most prominent physicians in New Hampshire, died at Manchester, on January 30th, of congestion of the brain, after a two weeks' illness. Dr. Crosby was born in Lowell, Mass., in 1831, and came from a race of distinguished physicians. He was graduated at Dartmouth in 1852. In 1857 he sailed for Peru, but stopped on the Isthmus of Panama and cared for the railroad employés, who were being swept away by cholera. From there he went to Mexico, and treated Mexicans afflicted with yellow fever. On the breaking out of the Civil War, when he returned to the United States, he volunteered and rendered surgical and medical service in camp and on the field throughout the struggle. Dr. Crosby had been President of the New Hampshire Medical Society, and was a member of the Manchester Board of Health at the time of his death.

A Prize for Pasteur.—The Turin Academy of Sciences has awarded the Pressa prize of 12,000 francs to M. Pasteur.

The Neurological Society of London has been recently organized. Samuel Wilks, M.D., F.R.S., is its president, and Sir James Crichton-Browne and Jonathan Hutchinson, vice-presidents. Its list of membership includes the best English neurologists.

The Martyrology of Psychiatry.—Under this striking heading *The American Journal of Insanity* quotes the researches of a French physician who has collected twenty-four instances of murderous assault on asylum physicians by insane patients. The list includes four Americans.

Professor Koch has been made *General-Arzt* in the Suite of the Prussian Sanitary Corps.

An Institute of Christian Science.—Professors of Christian Science, as taught in the college for this theory at Boston, have applied for a charter in Philadelphia. On challenging their right to license under the term practitioners the assertion was made that a failure to administer drugs exempted them from this classification. Further legal trial of the terms employed in licensing medical persons will undoubtedly result.

The Rewards of Medicine.—Sir Andrew Clark, of London, is reported to have said that "I worked twelve years for bread, twelve for butter, and twelve more for the luxuries of life."

Dangerous Tea.—An English wedding party was recently poisoned by partaking of tea brewed in an old copper urn. All the guests were made seriously ill, and required prompt medical care.

Professor Gosselin.—A bronze medal is about to be struck in honor of this distinguished French surgeon.

A Floating Hospital for Fishermen at Sea.—A project has been recently set on foot in England to provide a hospital ship for the fishermen in the North Sea. It is estimated that about twelve thousand English-speaking men are afloat upon this body of water, and in situations which render it difficult to obtain medical care.

Cheap Quinine.—The *American Analyst* reports that the price of quinine has been reduced from $5 an ounce to less than $1, and a dealer says it will remain cheap hereafter. The reason is that the chinchona are not destroyed in taking off the bark. Formerly the bark was stripped clean and the trees were left naked to bleed to death. Now, when the bark is removed, the trees are swathed with moss, new bark forms on them, and instead of living to bear one crop of bark they yield their bark yearly.

A Burial Reform Association.—From the *Boston Medical and Surgical Journal* of January 5, 1888, we learn that a Burial Reform Association has recently been organized under the auspices of the Protestant Episcopal Church, although it is intended that it shall be undenominational in character. Among the reformatory measures which it seeks to carry out are the following:

The exercise of economy and simplicity in everything pertaining to funerals.

The early interment of the body in soil suitable for its prompt resolution into its ultimate elements.

The use of such materials for the coffin as will rapidly decay after burial.

The substitution of burial plots for family vaults. The encouragement, on sanitary grounds, of the removal, in crowded districts, of the body to a mortuary, instead of retaining it in rooms occupied by the living.

The Adulteration of Wines.—The *American Analyst* of January 1, 1888, describes the following methods of adulteration of wines, most commonly practised by unscrupulous dealers:

The simplest one is mixing. The native wines of Ohio, New York, Missouri, and especially California, differ from those of Europe chiefly in being richer in body, flavoring, and alcohol—so rich, as to be at times coarse or harsh. A mixture of one-third light-bodied Rhine or Bordeaux wine, one-half of the corresponding California stuff, and one-sixth water will produce a liquid that is hardly distinguishable from a first-class imported vintage.

The proportions given simply apply to one case, and must be varied to suit the palate of the mixer as well as the chemical composition of the ingredients employed. Thus, one-half Santa Rosa, one-third water, and one-sixth imported Binger are used by a Fulton Street merchant to produce a fac-simile of the last-named wine. The skill and delicacy attained by these mixers is phenomenal. One, a German-American dealer, can taste any ordinary wine once and in fifteen minutes make a composition that can scarcely be distinguished from the original in color, flavor, bouquet, sweetness, and body.

A lower class of imitators dispense with the natural grape altogether. One concern on Front Street, unearthed by the New York Board of Health, in May last, was found to have its vineyard in the cellar and top loft of a vast warehouse. Here, from damaged raisins, currants, elderberries, and other cheap dried fruits it made a wine of the chcapest and vilest kind. It was so vile and

poorly made that the "viniculturist" was compelled to fortify it with spirits, and preserve it with salicylic acid to prevent its putrefaction in either glass or wood. The officials learned that he sold the execrable stuff to groggeries, cheap restaurants, and to wholesale dealers for mixing purposes, A "vineyard" of similar character in Hudson Street supplies the basing for "Beef, Iron, and Wine," "Wine of Cocoa," "Wine, Iron, and Strychnine," and other well-known medical preparations. Nor is this miserable work confined to New York City. In the *Courrier des États Unis*, this current month, are two book advertisements, one which teaches how to make a superior wine out of raisins, and the other how to make the same thing out of raisins, currants, and other materials. The books are written and published in Paris, and must have a large sale and use, both at home and abroad, when their editor finds it profitable to advertise them on this side of the Atlantic.

The Hour of Delivery.—The *British Medical Journal* writes that an industrious statistician has recently contributed to a medical journal at Lille, the results of an analysis of one thousand labors, with the precise hour at which delivery took place. He reports that 45 per cent. of the labors terminated between 8 A.M. and 8 P.M., and 56 per cent. between 8 P.M. and 8 A.M. Pushing the inquiry a step further, he found that 23 per cent. terminated between 6 A.M. and midday; 22 per cent. between midday and 6 P.M.; 27 per cent. between 6 P.M. and midnight, and 54.1 per cent. during the night—that is to say, between midnight and 6 A.M. These figures only apply to normal labors, in which nothing interfered with the physiological course, so that they go far to confirm the popular notion which admits the greatest frequency of delivery at night, "conception generally taking place at about that time."

Air Filters in Limiting the Contagion of Scarlatina.—Dr. Eccles, of Brooklyn, describes in *Science*, of January 6, 1888, the following device which he has found useful in limiting the contagion of scarlatina:

The evidence we have, indicates that the germs or spores float as impalpable dust in the air. It is found by experiment that wet gauze, by evaporation, is colder than surrounding air. Dust is attracted from warm air to a cold body. If that body is wet, it adheres. By canopies of mosquito-netting over the sick bed, kept wet with bichoride of mercury solution containing glycerine, no dust can pass through the meshes in either direction. The cooled threads attract across the narrow space of the mesh all dust that reaches there. The glycerine and water fix it, and the corrosive sublimate sterilizes it. To keep up the application, two layers of netting are required—one fixed, the other removable. The outer removable one can at stated times be wrung out of a fresh solution, and put back again. Overlapping folds can allow the passage of food, medicine, etc., to the patient. This provides perfect isolation even in a room occupied by others.

To Render Tincture of Iron Tasteless.—The *American Druggist* for January, 1888, gives two methods which are very effective in accomplishing the result desired.

1. Pour the measured quantity of tincture of iron, immediately before administering or taking it, into a sufficient quantity of *milk*, about a wineglassful for every 10 drops of tincture. This method was first recommended by Hager. The iron probably changes to phosphate in this case.

2. Pour the tincture into a sufficient quantity of *Vichy water*—about 1 fluidounce for every 10 minims of tincture. This method is often practised in the public hospitals of New York. Our attention was first drawn to it by Dr. A. B. Pope. In this case, of course, the iron changes to carbonate, the carbonic acid being speedily disengaged, and ferrous hydrate being deposited on standing. In this form it has been found to be quite easily taken, and, so far as known, with best results.

A Healthful Sleeping-Room.—Dr. Crowell, in the *Popular Science News* for January, 1888, describes a healthful sleeping room as follows:

Modern luxury has made sleeping-rooms receptacles for elegant appointments; and we find them filled with numberless articles of fanciful design—knicknacks, draperies, rugs, carpets, and every conceivable thing that æsthetic taste can invent. Hence there can be no pure air in such rooms, and the accumulation of *filth* and dust is something wonderful. While we would not strip these rooms of all artistic adornment, we insist upon simplicity; and first of all, we would discard heavy woollen carpets. They are filthy; and if the good housewife does not believe it, let her look across the room when the sun is shining through it, and see the line of dust constantly rising. Of course, this process goes on night and day, and it is unavoidable when the floor is encumbered with the woollen covering. Let the floor be laid in solid wood —birch thoroughly kiln-dried is perhaps the best—and let there be no cracks or seams for dust and vermin. A few closely woven rugs can be disposed in front of bed and toilet table, and these can be removed and shaken every day, while the floor is wiped with a damp cloth. The moral influence of such cleanliness is certainly conducive to sleep, to say nothing of the direct sanitary effects. Bare walls are better than paper hangings, even when the paper is free from arsenic; and with the soft, warm tints at the disposal of the painter, the walls can be made to glow with cheerful light.

Sinks with hot and cold water, connected with the sewerage system, should be discarded for obvious reasons; and in all houses where the fixtures pollute the sleeping-room, there should be a complete revolution in their removal. Not one in twenty of these filthy receptacles is securely trapped; and with the old devices of chain, plungers, overflow pipes, and leaky crevices, we are at variance with all sanitary rules and conditions. Let all such "conveniences" be relegated to the bath-room with open plumbing.

It is better to go back to the old washstand than to endanger the health with any such superfluous trappings. An open fireplace is not only a luxury, but a necessity as a mode of ventilation; and then, with iron or brass bedstead, with woven wire bottom and hair mattress, and with simple window-shades or shutters, we shall have a sleeping-room combining the requisite conditions for cleanliness and health.

Glucose by Synthesis.—Another important acquisition, says *Nature*, to our store of knowledge has recently been made. Glucose, commonly called grape sugar, has been

artificially prepared by Drs. Emil Fisher and Julius Tafel in the chemical laboratory of the University of Wurzburg. This happy achievement, which is announced in the number of the *Berichte* just received, is one which has long been looked forward to, and which cannot fail to give deep satisfaction in chemical circles all over the world. As is generally the case in syntheses of this description, not only has the sugar itself been actually prepared, but, what is at least quite as important, considerable light has been thrown upon that much-discussed question, the constitution of sugars. A most remarkable, and yet only to be expected, attribute of this artificial sugar is that it is found to be entirely incapable of rotating a beam of polarized light. As is well known, there are several naturally occurring varieties of glucose, all of which may be expressed by the same empirical constitution, and all possessing the power of rotating the plane of polarization; dextrose, or grape sugar, the best known of these varieties, as its name implies, deviates the plane of polarization to the right, as do several other less important varieties; while lævulose, or fruit sugar, rotates the plane to the left. But in artificially preparing a glucose there is just as much tendency for one kind to be formed as another, and the probability is that both dextro and lævo are simultaneously formed, and thus neutralize each other, producing a totally inactive mixture. It may be that, as in case of racemic acid, the two kinds are formed side by side, and neutralize each other in the solution; or it may even be, that, as is the case with truly inactive tartaric acid, there is a true neutralization within the molecule itself. Which of these hypotheses is correct is a question for further work to decide.

A Poisonous Prescription.—An Australian pharmacist recently dispensed the following prescription:

℞.—Potassii chloratis	. . .	gr. 40.
Syr. ferri iodidi	. . .	fl. ʒ 4.
Syrupi	. . .	fl. ʒ 4.
Spir. chloroformi	. . .	♏ 20.
Aquæ	. . .	q. s. ad fl. ℥ 2.

"As reported there, 'the mixture, when dispensed, was of a light-brown color, which gradually darkened, and in a few hours iodine was deposited in abundance. In this condition, the mixture was administered to a child, eventually causing death.'"

Now it is well known that, under the influence of light and air, and in the presence of water, ferric iodide constantly eliminates traces of hydriodic acid, which will, under certain conditions, decompose so that the iodine is set free, giving the solution a dark color. In the presence of sugar or certain other substances (such as hypophosphorous acid), however, the free iodine is again taken up and reconverted into hydriodic acid. As the process of eliminating hydriodic acid seems to go on continually, it appears to us that this body exerts its decomposing action on the chlorate while in *a nascent state*. But the eliminated chlorine immediately again decomposes the trace of iodide formed. We can account for the reaction in no other way, but would suggest that this subject be taken up by some one who has the necessary time to devote to its study. Incidentally we would remark that the presence of peroxide of hydrogen in the atmosphere, or the addition of peroxide of hydrogen to hydriodic acid or to the iodides causes an abundant liberation of iodine. It is not impossible that the presence of this body may have something to do with the reaction.—*American Druggist*, January, 1888.

To Clarify Muddy Water.—The *Pharmaceutical Era* for January, 1888, gives the following directions:

Charge slips of filter paper respectively with ferric chloride and with sodium carbonate, dry and preserve for use. Place one of the ferric chloride slips in the water to be clarified, and in a few moments one of the soda slips. The flocculent precipitate of ferric hydrate produced clarifies the water, which may then be filtered through a funnel whose neck is filled with a piece of sponge.

Alum may be substituted for the ferric chloride, and will give nearly as good results, but will leave a little more saline matter in solution.

Hindoo Philanthropy.—The *British Medical Journal* writes that the Maharajah of Darbhanga, in Bengal, has established a hospital and dispensary for female patients near his ancestral seat in the district of Darbhanga, Behar, and is erecting new quarters for its accommodation at a cost of 55,000 rupees, in connection with Lady Dufferin's Medical Aid for Women Fund. This is one of the least considerable of the long series of philanthropic acts on the part of this distinguished Hindoo on a scale of magnificence hardly ever equalled.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY, FROM JANUARY 24 TO JANUARY 30, 1888.

BURTON, H. G., *Captain and Assistant Surgeon.*—Granted leave of absence for one year on S. C. D., to take effect when able to travel.—*S. O.* 19, *A. G. O.*, January 24, 1888.

FISHER, W. W. R., *First Lieutenant and Assistant Surgeon.*—Granted leave of absence for one month, on surgeon's certificate of disability.—*S. O.* 4, *Department of California*, January 20, 1888

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE-HOSPITAL SERVICE, FOR THE WEEK ENDING JANUARY 28, 1888.

WHEELER, W. A., *Passed Assistant Surgeon.*—Granted leave of absence for thirty days, January 24, 1888.

WHITE, J. H., *Passed Assistant Surgeon*—Granted leave of absence for two days, January 26, 1888.

WATKINS, R. B., *Assistant Surgeon.*—Granted leave of absence for thirty days, January 28, 1888. Resignation accepted to take effect March 15, 1888, January 28, 1888.

VAUGHAN, G. T., *Assistant Surgeon*—Appointed an Assistant Surgeon January 25, 1888, vice A. D. Bevan, resigned. Assigned to temporary duty at Marine Hospital, Boston, Mass., January 26, 1888.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*